

RBB
165

1949.

QUEENSLAND.

ANNUAL REPORT

ON THE

HEALTH AND MEDICAL SERVICES

OF THE

STATE OF QUEENSLAND

FOR THE

YEAR 1948-49.



PRESENTED TO PARLIAMENT BY COMMAND

BRISBANE :
BY AUTHORITY: A. H. TUCKER, GOVERNMENT PRINTER.

A. 53—1949.

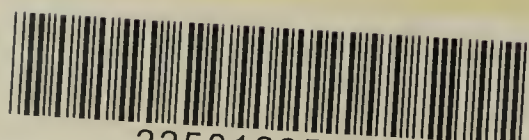
RBB

CONTENTS.

	Page.
Staff	1
Vital Statistics	3
Communicable Diseases	5
Leprosy	11
Section of Enthetic Diseases	14
Section of Public Health Supervision	18
Food and Drugs	18
Sanitation Section	29
Hookworm Campaign	45
Weil's Disease Campaign	46
Section of Industrial Hygiene	48
Laboratory of Microbiology and Pathology	55
Government Chemical Laboratory	60
Section of Maternal and Child Welfare	73
School Health Services	86
Section of Mental Hygiene	90
Section of Social Services	108
Legislation	109
Appendix—Foundry Survey	110

WELLCOME INSTITUTE LIBRARY	
Coll.	WELLCOME
Call	+
No.	Amr Rep
	WA 28
	•K A 8
	Q 2

1949



22501295871

ANNUAL REPORT OF THE DIRECTOR-GENERAL OF HEALTH AND MEDICAL SERVICES, 1948-49.

The Honourable the Minister for Health and Home Affairs.

SIR,—I have the honour to submit for your information the annual report of the activities of the Health and Medical Services Branch of the Department of Health and Home Affairs (Queensland) during the year ended 30th June, 1949.

STAFF.

Difficulty is still being experienced in filling vacant positions and obtaining suitable personnel to expand existing services. Dr. M. J. J. O'Reilly was appointed Deputy Director of the Laboratory of Microbiology and Pathology, and Dr. G. M. Reid, Deputy Director of the Section of Maternal and Child Welfare.

Dr. D. W. Johnson resumed duty after a long illness. Before resuming he attended the University of Sydney, where he obtained the Diploma of Tropical Medicine and Hygiene, and he was subsequently appointed Deputy Director-General of Health and Medical Services.

Dr. Lorna Archibald was successful in obtaining the Diploma of Dermatology and has resumed duty in the Section of School Health Services.

It is with regret that the sudden deaths of Dr. P. F. V. Crowe and Mr. F. H. Julian are recorded. Dr. Crowe occupied the position of Deputy Superintendent of the Brisbane Mental Hospital for many years. He was succeeded by Dr. H. R. G. Barrett. Mr. Julian was Superintendent of the Epileptic Home at Willowburn and during his short term of office reorganised the life of the institution.

Dr. J. I. Tonge, Director of the Laboratory of Microbiology and Pathology, was awarded a Rockefeller Foundation Fellowship and will be absent in the United States of America during the coming year.

SECTION OF MATERNAL AND CHILD WELFARE.

Although further subcentres have been opened in country areas, shortage of staff has prevented all positions being filled. The difficulty in inducing nurses to go to the country still continues.

The mortality rate of premature babes in the extra-metropolitan area shows an improvement, while there has been an increase in the mortality rate in the metropolitan area. These figures are calculated from questionnaires submitted to public hospitals and do not include premature babes born in private hospitals. They therefore are only an indication of the premature mortality rate trend and are not statistically accurate. Discussions will take place with the Registrar-General in order that information regarding prematurity can be included in his registration

form. More accurate statistics will be available with the adoption of the standard of the Committee of Inquiry into the Medical Aspects of the Decline of the Birth Rate. The question of notification of stillbirths must also be reconsidered if the maximum number of pregnancies is to be brought to a successful termination.

In endeavours to reduce the mortality rate of premature infants, a brochure has been prepared by Professor G. Shedden Adam, Professor of Obstetrics, Dr. Felix Arden, Paediatric Consultant of the Brisbane Women's Hospital, Dr. H. C. Murphy, Director of Maternal and Child Welfare, and Miss E. McCorkindale, of the Brisbane Women's Hospital. This will be an excellent publication, as it approaches the question of prematurity from the obstetrical, medical, and nursing points of view. It is concisely written and easy to understand and it should be of great value to the medical practitioners and nurses to whom it is hoped it will be distributed.

Approval has been given for the establishment of homes similar to the Clayfield and Toowoomba homes at Cairns, Townsville, Rockhampton, and Ipswich. Properties have already been acquired at all places except Cairns. These homes will be a factor in the reduction of deaths from prematurity, as frail babies with their mothers will be admitted under expert nursing supervision.

It is pleasing to note that toddlers' centres are increasing in number and are extending to the country. These ensure supervision of children between the ages of one and five years.

SECTION OF INDUSTRIAL HYGIENE.

Dr. W. D. Robson, of the McIntyre Research Foundation, Ontario, Canada, visited Queensland and inspected mines in various parts of the State to ascertain if conditions were suitable for aluminium therapy. This form of treatment is still under review, as insufficient time has elapsed since it was commenced to estimate its value. Its acceptance in other parts of the world has been very limited.

Expansion necessitating the appointment of a technician continues. Lectures are given to engineering students at the University in the preventive aspects of industrial hygiene by the Medical Officer in Industrial Hygiene, who is also preparing a brochure for teaching in the Technical College.

SECTION OF SCHOOL HEALTH SERVICES.

Limited medical examinations of school children have been continued as previously.

Approval was given for the appointment of a School Medical Officer to be stationed at Townsville, whose duty would be to conduct physical examinations of children of school age, but no applications were received for the position. Thorough examinations cannot be carried out until medical practitioners are available.

A greater service is being given to country children by nurses and dentists visiting schools not on the main lines of communication. Although the number of dentists employed has been increased, a general shortage is responsible for an insufficient number joining the staff to give the ideal service.

Plans have been approved for the new dental clinic which it is hoped will be in use next year.

SECTION OF ENTHETIC DISEASES.

The decrease in the incidence of venereal disease continues and includes decreases in the number of cases of both gonorrhoea and syphilis. These figures must be accepted on their face value, as it is assumed that medical practitioners are honouring their legal obligations by notifying cases of notifiable diseases as required by the Health Acts.

TUBERCULOSIS.

During the year the Commonwealth Government passed the *Tuberculosis Act*, 1948. The Commonwealth will bear the cost (by reimbursement) to the States of all new approved capital expenditure for tuberculosis on the part of the States for equipment, plant, land, and buildings as from 1st July, 1948, and will also bear the cost of net maintenance expenditure incurred in diagnosis, treatment, and control of tuberculosis in excess of that for the financial year 1947-48, subject to an agreement being entered into between the Commonwealth and the State.

Discussions have taken place between the Department and the Commonwealth Director of Tuberculosis; approval has been given to the plans of the Chermside Sanatorium, the building of which has been commenced but has been held up because of shortage of essential materials; plans for annexes of forty beds attached to the Townsville and Cairns Hospitals have also been approved.

The plan for control of tuberculosis includes a radiological survey of the whole population, and approval has been given for X-ray machines to be purchased for this purpose. One will be situated in the metropolitan area and two mobile units will be allotted to the country. In addition, a miniature X-ray unit will be located at the Brisbane Hospital for the purpose of X-raying all patients attending there. A special unit will carry out a survey of aborigines and Torres Strait Islanders. All units will be in charge of medical officers especially trained in the prevention and treatment of tuberculosis.

The Commonwealth Serum Laboratory commenced the manufacture of B.C.G. (Bacillus Calmette-Guerin) vaccine during the year, and Dr. E. North, of that institution, visited Brisbane to conduct a course of instruction in vaccination as B.C.G. vaccine will only be issued to approved persons. Medical officers of the main base hospitals were brought to Brisbane to attend the course so that they in turn could teach practitioners in their areas.

In the first instance special groups, such as medical and dental students, nurses, medical practitioners, and contacts of cases of tuberculosis, are being vaccinated, but it is intended that the general population will be Mantoux tested and those found negative will be given B.C.G. vaccine. This work will be carried out by the medical officers in charge of the X-ray units. A clinic has been established in the Department for the testing of contacts and any members of the community who desire to be vaccinated. The Welfare Officer visits the homes of cases and advises the contacts of the case to be X-rayed and Mantoux tested; she also gives information in regard to the Commonwealth tuberculosis allowance, which is supplemented by allowances from the State.

Concern is felt at the incidence of tuberculosis among aborigines and Torres Strait Islanders, as shown by the admissions to the Thursday Island Hospital. An inspection of some aboriginal missions in the Gulf was carried out to ascertain living conditions, and an inspection of the islands and missions will be carried out in the coming year with the Commonwealth Director of Tuberculosis.

Housing and diet even at the mission stations are poor. These are predisposing causes of tuberculosis, and if resistance to this disease is to be increased better housing and better diet must be provided. The Islanders receive the tuberculosis allowance, but for some reason aborigines who might also be taxpayers are not so privileged. Approaches have been made by the State Government to have the tuberculosis allowance paid to the local controlling authority of tuberculosis sufferers who would spend it for improving housing and diet. The request was refused despite the fact that the National Health and Medical Research Council at its twenty-sixth session resolved that—

“This council is of the opinion that, to ensure success of a plan for the control of tuberculosis, it must be reiterated—

- (a) That it is essential to make adequate provision for the economic security of the dependants of every person found to be suffering from tuberculosis, including aborigines under control.”

It is hoped that the question will be reopened in the coming year.

The State is still without the services of a Director of Tuberculosis. This position was advertised and an appointment made, but the successful appointee did not take up duty. The position has been readvertised and it is hoped it will be filled in the immediate future.

GENERAL.

It is pleasing to see business firms in this State reciprocating the Department's co-operation by submitting samples for examination to see whether they conform with the Food and Drug Regulations, 1939, before being sold on the local market. Many were found not to conform with the Regulations and were not offered for sale. These results are included in the statistics under the Government Chemical Laboratory.

The quality of bread being supplied in the metropolitan area has been the subject of criticism by consumers for some time. Two surveys were conducted during the year—one

before and one after the commencement of the 5 a.m. start. The results of the surveys may be tabulated as follows:

	1949.		1948.	
	Number	%	Number	%
Good Quality	5	9	3	5
Fair Average Quality	25	45	44	75
Poor Quality	26	46	12	20
	56	100	59	100

The reasons advanced for the poor-quality bread at the time of the first survey were:

- (1) The quality of the wheat. There was a shortage of "hard" wheats in the State and the imported flour was not first-class for bread making;
- (2) Poor tradesmanship;
- (3) Rush methods.

It is obvious from the above table that the standard of bread being supplied at present has deteriorated since the 5 a.m. start. The percentage of loaves of bread below average quality has increased from 20 per cent. to 40 per cent., while the bread above average quality has increased from 5 per cent. to 9 per cent.

In the baking of bread it is stated that it takes $1\frac{1}{4}$ hour for the baker to get the bread into the oven; 35-45 minutes for baking; and at least one hour to cool before loading into the cart—a total of $2\frac{3}{4}$ to 3 hours as a minimum for a good loaf.

An analysis of the reasons for poor-quality bread being supplied at present shows that—

- (1) The flour being used at present is superior to that being used at the time of the previous survey;
- (2) The standard of tradesmanship remains unaltered;
- (3) The rush methods have continued. When the application for the 5 a.m. start was before the Industrial Court it was stated or implied that the public would receive better baked bread if the earlier commencement were granted.

With the 7 a.m. start the first cartload of bread which left the bakehouse soon after 7 a.m. consisted of the previous day's baking, so that the hot bread had a reasonable time to be prepared, baked, and cooled before the cart returned to reload.

At present competition demands that hot bread be supplied on the first delivery, which still leaves the bakehouse shortly after 7 a.m. Speeding up therefore takes place, and this is usually done by underbaking the bread, overheating the oven, and thus rapidly cooking the bread, or loading the bread while it is hot.

It is impossible to lay down a legal standard for the quality of bread, as most of the factors which must be considered in estimating quality cannot be measured quantitatively. The decision as to the quality of bread in the above surveys was reached after discussion by a panel of three members of the staff of the Government Chemical Laboratory.

The use of pasteurised milk is increasing and Orders in Council have been made for its sale in the Southport, Ipswich, Toowoomba, Rockhampton, Warwick, Innisfail, and Townsville areas. Orders have been granted for the Mary-

borough, Mackay, and Bundaberg areas, but plants have not yet commenced operating. Pasteurisation plants are also operating in Brisbane, Cairns, Murgon, Nambour, and Merrimac. The Orders in Council are made under "*The Milk Supply Act of 1938*" and granted to companies after their financial status has been examined, the plant approved, and it has been ascertained that it is economically sound to establish the plant.

In Brisbane, raw milk is supplied from tuberculosis-free cows. It is estimated that this forms 18 per cent. of the milk sold to householders, while 75 per cent. is pasteurised milk sold in bottles. The remaining 7 per cent. consists of heat-treated milk sold in bulk.

Tests were carried out in regard to the keeping qualities of milk under summer conditions and it was proved that neither pasteurised nor raw milk will keep in an ice chest under these conditions for a period of 48 hours.

"*The Health Acts, 1937 to 1946*," were amended so that the control of waste process water being discharged into watercourses would be vested in one department. Power is given to the Director-General to enter into an agreement which will define the conditions under which waste process water can be discharged into watercourses, the agreement being subject to confirmation by the Governor in Council. As a result it is anticipated that an agreement will be signed with the Australian Paper Mills, who will commence the establishment of a factory, estimated to cost £1,000,000 in the first instance, in the near future at Petrie.

VITAL STATISTICS.

The estimated population of the State at 1st January, 1949, was 1,132,565, an increase of 26,286. That of Brisbane at the same date was 414,500, an increase of 12,318.

The crude birth rate is 24.8, a decline of 0.9 per 1,000 of the population. It is interesting to note that the birth rate, which increased up to 1947, greatly exceeded that of the prewar years. It is feared that the reduction in 1948 is the start of the decline which usually follows a war period, but it is hoped the rate will stabilise at a level in excess of that of prewar years.

The infant mortality rate of 28.0 is a reduction of 2.8 on that of 1948 and is the lowest ever recorded in the State. Nearly half of the deaths were due to prematurity and birth injuries and occurred during the first month of life.

The maternal mortality rate continues to decline. The main causes of death are as shown in the report of the Section of Maternal and Child Welfare.

Both the infant and maternal mortality rates should be reduced further by specialised treatment. Specialists in the various branches of medicine tend to remain in capital cities because specialist positions are not always available at country hospitals and economically the capital city is better. Every encouragement is given to young specialists in this State to settle in the country, as it is the policy to create part-time paid specialist positions at base hospitals as practitioners with the necessary qualifications become available.

An analysis of the causes of death of residents of Queensland as published by the Government Statistician does not show any increase of any

significance in any particular disease. There were 346 more deaths in 1948 than in 1947 but 186 less than for 1946, but the increase over the

past year is offset by the increase in population. The crude death rate of 9.3 is 0.1 per 1,000 population in excess of that of last year.

TABLE I.
CRUDE BIRTH RATE (PER 1,000 POPULATION).

—	1940.	1941.	1942.	1943.	1944.	1945.	1946.	1947.	1948.
Commonwealth of Australia ..	17.9	18.9	19.1	20.6	21.0	21.7	23.6	24.1	23.1
Queensland	19.9	20.8	20.4	22.2	23.1	24.8	24.8	25.7	24.7
New South Wales	17.8	18.5	18.6	20.0	20.7	21.1	22.8	23.2	22.2
Victoria	16.8	17.8	18.3	19.7	19.8	20.5	23.1	23.1	22.1
South Australia	16.7	18.2	18.5	21.4	21.5	22.3	24.8	25.2	24.1
Western Australia	19.3	21.4	20.8	22.0	22.6	21.9	24.6	25.6	25.1
Tasmania	20.7	21.7	22.0	23.0	21.2	23.3	27.2	27.7	26.4
New Zealand	21.2	22.8	21.7	19.7	21.6	23.2	25.2	26.4	25.5
England and Wales	14.5	14.1	15.6	16.2	17.5	16.1	19.2	20.6	17.9
Scotland	17.1	17.5	17.6	18.4	18.5	16.9	20.3	22.0	19.4
Eire	19.1	19.0	22.3	21.9	22.2	22.4	22.9	23.1	21.7
North Ireland	19.6	20.8	22.8	24.2	23.5	22.0	22.3	22.9	21.6
Canada	21.5	22.2	23.4	24.0	23.8	23.9	26.9	28.6	26.8

TABLE II.
CRUDE DEATH RATE (PER 1,000 POPULATION).

—	1940.	1941.	1942.	1943.	1944.	1945.	1946.	1947.	1948.
Commonwealth of Australia ..	9.7	10.0	10.5	10.3	9.5	9.5	10.0	9.7	10.0
Queensland	9.0	9.2	9.3	10.1	8.8	8.8	9.8	9.2	9.3
New South Wales	9.4	9.8	10.3	10.1	9.2	9.2	9.7	9.5	10.0
Victoria	10.7	10.6	11.2	10.8	10.3	10.2	10.6	10.4	10.4
South Australia	9.5	10.4	11.0	10.6	9.7	9.6	10.2	9.6	10.3
Western Australia	9.6	10.1	10.7	9.6	9.3	9.7	9.6	9.4	9.1
Tasmania	9.9	10.7	10.1	10.4	10.2	9.7	10.1	9.2	9.6
New Zealand	9.2	9.8	10.6	10.0	9.9	10.1	9.7	9.4	9.1
England and Wales	13.9	12.8	11.5	11.9	11.6	11.4	11.5	12.0†	10.8†
Scotland	14.9	14.7	13.3	14.0	13.6	13.2	12.6	12.9	11.8
Eire	14.2	14.6	14.1	14.8	15.3	14.3	14.0	14.9	12.1
North Ireland	14.6	15.2	13.3	13.4	12.8	12.3	12.4	12.4	11.1
Canada	9.8	10.0	9.7	10.1	9.7	9.4	9.4	9.4	9.3

† Provisional.

TABLE III.
INFANT MORTALITY RATE (DEATHS UNDER 1 YEAR PER 1,000 BIRTHS).

—	1940.	1941.	1942.	1943.	1944.	1945.	1946.	1947.	1948.
Commonwealth of Australia ..	38.4	39.7	39.5	36.3	31.3	29.4	29.0	28.6	27.8
Queensland	35.3	39.1	34.8	37.8	31.3	29.8	29.3	30.8	28.0
New South Wales	39.0	43.8	40.2	36.2	30.7	30.6	30.2	29.8	30.3
Victoria	39.4	36.2	41.7	35.8	33.0	28.0	27.2	26.2	23.9
South Australia	35.5	32.5	39.7	36.7	28.8	28.1	27.1	24.3	29.7
Western Australia	44.2	35.3	36.9	32.6	32.7	29.5	31.1	30.9	25.6
Tasmania	35.2	49.0	42.4	40.6	38.3	27.5	30.1	27.3	27.7
New Zealand	30.2	29.8	28.7	31.4	30.1	28.0	26.1	25.0	*
England and Wales	56.8	60.0	50.6	49.1	45.4	46.0	42.9	41.4	34.0†
Scotland	78.3	82.7	69.3	65.2	65.0	56.0	54.0	*	*
Eire	66.0	74.0	69.0	83.0	79.0	71.0	65.0	67.0	*
North Ireland	86.0	77.0	76.0	78.0	67.0	68.0	54.0	*	*
Canada	56.0	60.0	54.0	54.0	55.0	51.0	47.0	45.0	*

* Not available.

† Provisional.

TABLE IV.
EXPECTATION OF LIFE AT VARIOUS AGES IN YEARS (AVERAGE OF MALE AND FEMALE EXPECTATIONS).

Country.	Period on which Data Calculated.	Expectation of Life, in Years, at Age.							
		0	1	10	20	30	40	50	60
Commonwealth of Australia..	1932-34	65.3	67.1	59.5	50.2	41.3	32.6	24.2	16.7
Queensland	1932-34	64.9	66.8	59.3	50.0	41.3	32.7	24.4	16.9
New Zealand	1934-38	67.0	68.2	60.3	51.0	42.0	33.0	24.6	16.8
England and Wales	1937	62.3	65.1	57.9	48.8	40.0	31.2	22.8	15.4
Scotland	1930-32	57.8	61.9	56.1	47.2	38.6	30.3	22.3	15.0
Canada	1940-42	59.8	67.4	59.9	50.6	41.8	32.9	24.5	16.8
Ireland	1935-37	58.9	62.4	55.9	47.0	38.9	30.7	22.8	15.8

COMMUNICABLE DISEASES.

Infectious diseases remained at a low level throughout the State during the past year; in fact, none of the notifiable diseases showed any significant increase with the exception of bacillary dysentery.

Bacillary dysentery.—Sixty-five cases of bacillary dysentery were reported in 1948-49, as compared with 17 the previous year. This disease is transmitted by flies and by unhygienic methods of food handling, either in public eating establishments or in the home. Fortunately, the disease was mild—in fact, many cases in infants and young children would have been missed had it not been for bacteriological examinations. There is no real evidence that bacillary dysentery was more common last year than in any other year—the increased number of reported cases is due almost entirely to better bacteriological methods and to the fact that doctors and parents are increasingly aware of the significance of gastro-intestinal upsets in children since the big outbreak of gastro-enteritis in Brisbane in 1947. A feature of many of these mild cases was that the causal organism (one of the Flexner 2 group) was resistant to sulpha drugs—perhaps it was an adapted strain.

Infantile diarrhoea.—As a result of the gastro-enteritis outbreak which occurred in Brisbane in 1947 considerable investigational work into the epidemiology and control was carried out at the Queensland Institute of Medical Research. Some of this work was of outstanding quality and will have great permanent value. However, it was felt that if gastro-enteritis had been a notifiable disease in 1947 control measures could have been put into effect earlier. Consequently, on 26th March, 1949, the Governor in Council approved that “diarrhoea for more than forty-

eight hours’ duration in children under two years of age” be made a notifiable disease throughout Queensland. Since infantile diarrhoea was first made notifiable 41 cases of the disease have been reported, and many have been investigated at the Institute of Medical Research. It is felt that notification is a progressive step—it will keep the disease prominently before medical practitioners; it will ensure that outbreaks will be investigated; and it will enable control measures to be promptly and intelligently put into effect. Furthermore, the Department will be able to gather statistical data on the prevalence of these important infections in young children.

Diphtheria.—A total of 145 cases was reported, 119 being from the extra-metropolitan area and only 26 from the Greater Brisbane area. This compares with a total of 271 cases in the previous year.

Although the incidence of diphtheria was declining before mass immunisation procedures were introduced in Queensland about 20 years ago the decline was irregular and each year from 50 to 80 children died of the disease. Since mass immunisation has become accepted the disease has shown a rapid and progressive reduction both in numbers and in mortality.

As the table below indicates, diphtheria in 1939 had an attack rate per 100,000 population of 153 in Brisbane, 74 in the country, and 100 throughout the State. Ten years later (in 1948) these figures were 6, 17, and 13 respectively—a truly remarkable reduction for which full credit must be given to diphtheria prophylaxis and to the energy and enthusiasm with which local authorities have conducted anti-diphtheria campaigns.

TABLE V.

DIPHTHERIA IN QUEENSLAND—SHOWING MORTALITY RATES AND ATTACK RATES OVER THE 10-YEAR PERIOD 1939-48.

Year.				Deaths.		Notifications.					
				Number.	Mortality rate per 100 notifications.	Metro-politan.	Extra Metro-politan.	State.	Attack rate per 100,000 Population.		
									Metro-politan.	Extra Metro-politan.	State.
1939	..	..	..	39	3.84	505	509	1,014	153.03	73.99	99.62
1940	..	..	..	24	4.01	242	356	598	72.13	51.42	58.78
1941	..	..	..	29	4.68	202	417	619	58.68	60.09	59.63
1942	..	..	..	30	4.18	93	385	478	26.30	56.12	45.98
1943	..	..	..	50	7.37	242	436	678	65.32	64.34	64.68
1944	..	..	..	26	5.10	204	306	510	53.12	45.15	48.03
1945	..	..	..	17	3.41	163	336	499	41.41	49.16	46.33
1946	..	..	..	20	4.34	92	369	461	23.03	53.49	42.32
1947	..	..	..	13	2.85	79	377	456	19.64	53.54	41.21
1948	..	..	..	5	3.31	26	125	151	6.27	17.41	13.33

A tribute should be paid to the effective campaign launched by the Brisbane City Council, which has been a model and inspiration to other local authorities in this respect. Free immunisation was commenced in 1931; two years later children of all ages were being immunised at schools. Publicity has been constant and very efficient in impressing mothers with the necessity of immunisation for their children. In 1930-31 no fewer than 658 persons contracted diphtheria; in 1948-49 the number was 23. It is estimated that 86 per cent. of children attending Brisbane schools have been immunised against diphtheria. A reduction of diphtheria

incidence to one twenty-fourth of the level ten years ago speaks for itself.

Over the State as a whole about 80 per cent. of children of school age have been immunised—the figure being higher in some local authority areas than in others. Although this indicates a high level of immunity in the child population, still further improvement can be achieved. Diphtheria prophylaxis is a continuing process and must be maintained to keep up with the number of new births each year.

It should be stressed here that immunisation, even by the three-dose method, will not confer

absolute and lifelong immunity against diphtheria. The degree of immunity diminishes in time, and overseas experience has shown that malignant diphtheria can still occur in a highly-immunised population. This can be seen by the increase in cases in 1943, presumably due to new strains. However, the proper administration of an efficient prophylactic will reduce to negligible proportions the incidence and mortality of diphtheria. Moreover, if a previously immunised child is attacked, the disease is usually mild. The attack rate in immunised children is extremely low, but it could be reduced still further by giving children a "booster" dose at the age of school entry. As a routine procedure this is possibly not justified here except in the presence of an epidemic. Furthermore, newer prophylactic agents now being developed and shortly to be used in Australia will confer better immunity than the present agents and "booster" doses may not be needed with the disease at its present level.

Dissection of notifications of diphtheria over the last 10 years shows that children under the age of 10 are still the chief victims, this age group comprising approximately 70 per cent. of all cases of the disease, though naturally the attack rate has fallen considerably in that time. However, one significant feature is that there has been an absolute increase in the number of infants under 12 months of age who contract the disease. This seems to indicate that children should be immunised earlier. The usual age for immunisation at present is between nine and twelve months. In recent years there has been a tendency to immunise children earlier—even before six months of age—and this should be encouraged. Any immunity a newborn baby has inherited from the mother is transitory, and diphtheria in babies carries a high mortality. The 10-19 age group has not been attacked more frequently in the last 10 years, but the age group 20 and over comprised 17 per cent. of all cases of diphtheria in 1948, as compared with 12 per cent. in 1939. A large percentage of persons in this group have never been immunised against the disease. In the age group 20 and over twice as many females as males contracted the disease, probably because women have closer contact with children.

The graph reproduced below shows that a greater reduction in the incidence of diphtheria

has occurred in the metropolitan area than in country districts. Although some local authorities have been diligent and active in their anti-diphtheria campaigns, others have been less enthusiastic. There is room for improvement in the extra-metropolitan figures, and although 1948 did see a significant reduction in the number of cases for the first time in 10 years, local authorities with scattered populations will need to ensure that more children are immunised if their figures are to be reduced to those of the Greater Brisbane Area.

In concluding, it may be said that the control of diphtheria in Queensland has been very satisfactory and that diphtheria is at present a diminishing public health problem.

Other Notifiable Diseases.—Tuberculosis showed a slight but probably insignificant decline, there being 444 cases notified during 1948-49, as compared with 476 in the previous year.

Poliomyelitis showed no fluctuation from the previous year and only sporadic cases were reported.

A total of 65 cases of typhus fever were notified. Only 6 of these were from the metropolitan area—an indication of the efficient rat destruction in the city area which certain other local authorities might emulate with advantage. Of the 59 cases reported from country districts, 15 cases of endemic typhus occurred in people connected with the peanut industry on the Atherton Tableland. This industry attracts the rats which are the source of the disease. An energetic campaign of rat destruction was instituted in the area, together with spraying and dusting with D.D.T. to kill fleas (which transmit the disease to man). It is not expected that the disease will recur in the future to the same extent.

Typhoid fever is rare in Queensland and is not a public health problem, but sanitary standards must never be allowed to lapse or it may again increase. The incidence of puerperal infections continues to decrease, due to better techniques in obstetrics.

A minor outbreak of leptospirosis (Weil's disease) on the northern canefields around Innisfail is referred to by the Medical Officer in Industrial Hygiene.

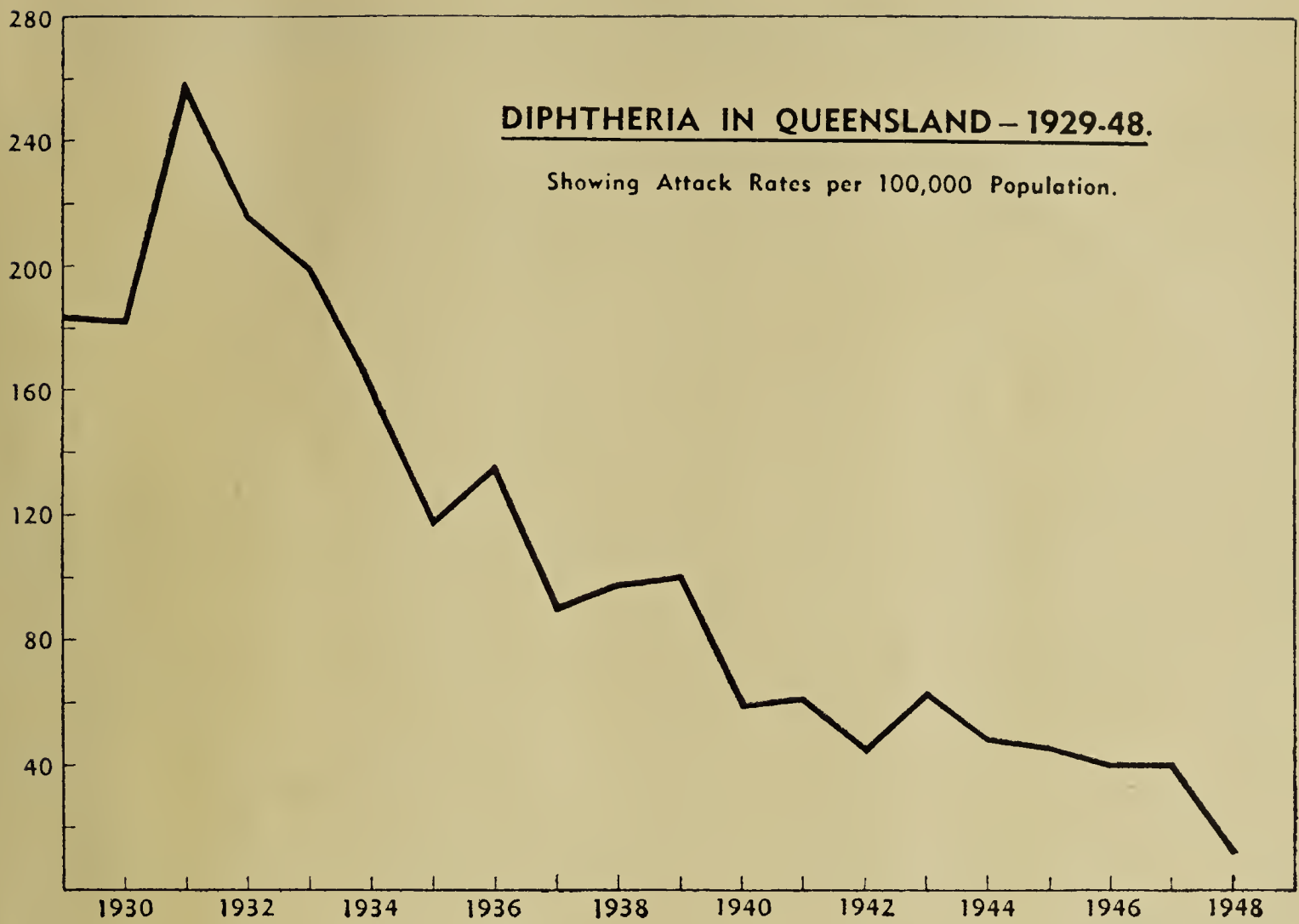


Figure
Showing Incidence of Diphtheria 1939-1948—Metropolitan and Extra Metropolitan Areas.

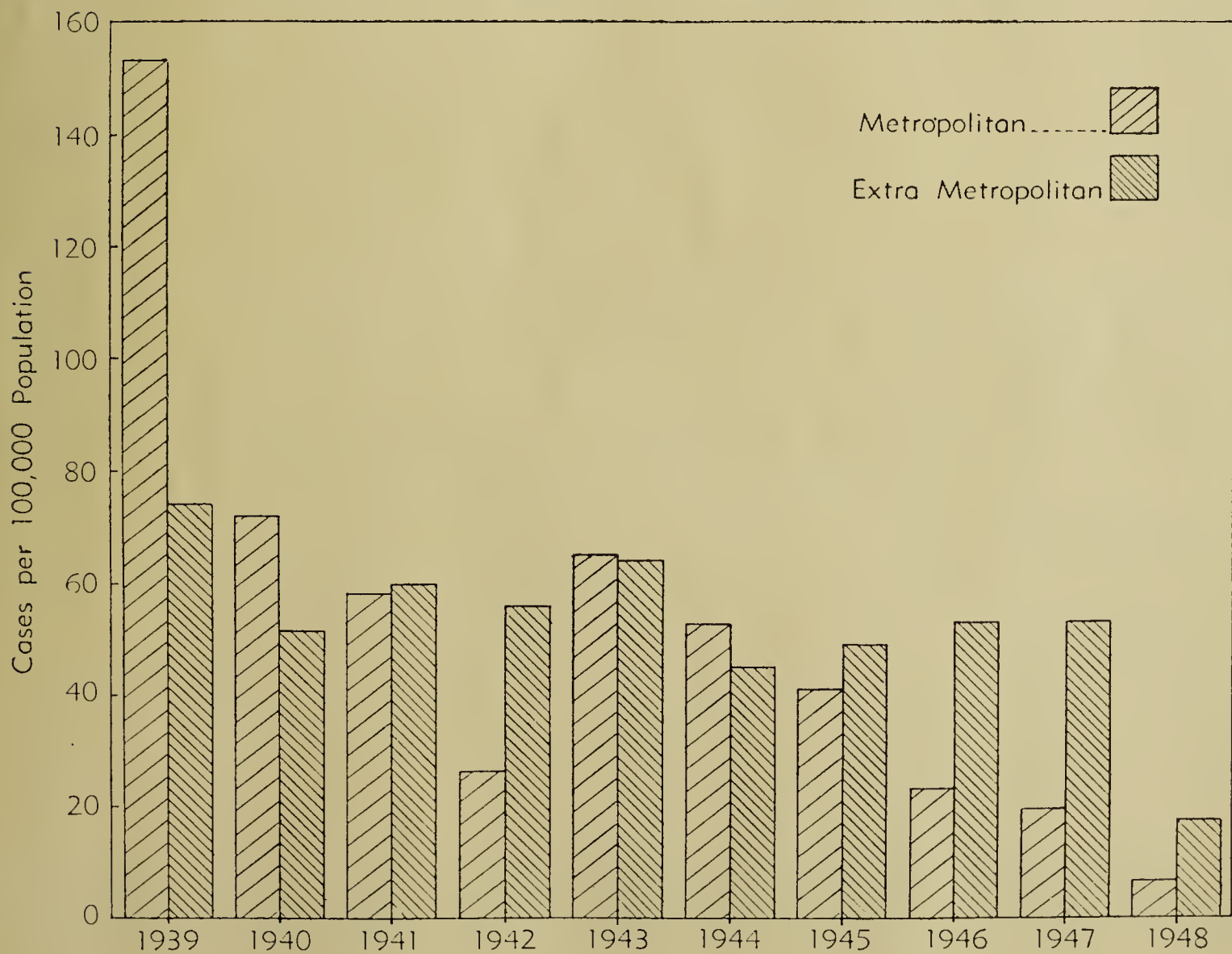


TABLE VI.

COMMUNICABLE DISEASES (EXCLUSIVE OF VENEREAL DISEASES) 1ST JULY, 1948, TO 30TH JUNE, 1949.
METROPOLITAN AREA (POPULATION AT 1ST JULY, 1948—410,000).

Diseases.	Months.												Total 1948- 1949.
	1948.						1949.						
	July.	Aug.	Sep.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	April.	May.	June.	
Anchylostomiasis ..	..	..	..	1	1	..	..	..	..	..	..	1	3
Anthrax .. ..	..	..	..	..	..	..	..	..	..	..	..	..	..
Bilharziasis .. ..	..	..	..	..	..	..	..	..	..	..	..	..	..
Cholera .. ..	..	..	..	..	..	..	..	..	..	..	..	..	..
Coastal Fever ..	..	..	..	..	..	..	..	..	..	..	..	..	..
Diarrhoea (infantile) *	..	..	..	..	..	..	..	..	..	7	10	13	30
Diphtheria	5	..	1	1	2	1	2	5	1	4	2	2	26
Dysentery, Amoebic	..	..	..	..	..	..	..	..	..	..	..	..	..
Dysentery, Bacillary	2	..	2	1	9	17	9	1	1	..	1	1	44
Encephalitis Lethar- gica .. ..	..	..	..	..	..	..	..	..	..	..	..	..	..
Filariasis .. ..	..	..	..	..	..	..	..	..	..	..	..	..	..
Lead Poisoning ..	..	..	..	..	..	..	..	..	..	..	..	..	..
Leprosy .. ..	..	..	..	..	..	..	..	..	..	..	..	..	..
Leptospirosis (Weil's Disease, Paraweil's Disease, Seven-day Fever) .. ..	..	..	..	..	..	..	..	..	..	..	..	..	..
Malaria	3	3	4	..	..	4	1	..	..	4	..	7	26
Meningitis, Cerebro- spinal	2	..	1	1	..	..	..	..	2	..	1	..	7
Mossman Fever ..	..	..	..	..	..	..	..	..	..	..	..	..	..
Plague, Bubonic or Oriental .. ..	..	..	..	..	..	..	..	..	..	..	..	..	..
Poliomyelitis, Acute Anterior .. ..	..	1	1	1	1	1	..	..	..	..	..	..	5
Puerperal Fever ..	..	..	..	..	..	..	..	..	..	..	..	..	..
Puerperal Pyrexia ..	6	8	1	4	2	1	1	3	1	1	..	2	30
Relapsing Fever ..	..	..	..	..	..	..	..	..	..	..	..	..	..
Sarina Fever ..	..	..	..	..	..	..	..	..	..	..	..	..	..
Scarlet Fever or Scarlatina	13	9	13	12	10	18	14	14	15	14	17	16	165
Smallpox (including Amaas or Alastrim)	..	..	..	..	..	..	..	..	..	..	..	..	..
Tuberculosis (all forms)	16	16	24	20	30	31	17	28	23	16	17	33	271
Tetanus	1	2	2	..	2	2	..	1	1	2	..	3	16
Typhoid Fever (in- cluding Paratyphoid Fever) .. ..	..	..	1	..	..	1	..	..	2	..	1	..	5
Typhus Fever (in- cluding Rural and Urban Forms and Japanese River Fever) .. ..	..	..	1	1	..	..	1	..	1	..	2	..	6
Undulant (Malta) Fever .. ..	..	..	..	..	..	..	..	..	1	..	..	1	2
Yellow Fever ..	..	..	..	..	..	..	..	..	..	..	..	..	..
Totals ..	48	39	51	42	57	76	45	52	48	48	51	79	636

* Diarrhoea for more than 48 hours' duration in children under 2 years of age was declared a notifiable disease with respect to the whole of the State of Queensland on 24th March, 1949 (*vide* Government Gazette 26-3-49, page 1066).

TABLE VII.

COMMUNICABLE DISEASES (EXCLUSIVE OF VENEREAL DISEASES) 1ST JULY, 1948, TO 30TH JUNE, 1949.
EXTRA-METROPOLITAN AREA (POPULATION AT 1ST JULY, 1948—717,316).

Diseases.	Months.												Total 1948- 1949.
	1948.						1949.						
	July.	Aug.	Sep.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	April.	May.	June.	
Anchylostomiasis ..	3	1	..	3	1	1	..	2	1	..	2	2	16
Anthrax .. ..	..	..	..	..	..	..	..	..	..	..	..	..	..
Bilharziasis .. ..	..	..	..	..	..	..	..	..	..	..	..	..	..
Cholera .. ..	..	..	..	..	..	..	..	..	..	..	..	..	..
Coastal Fever ..	..	..	..	..	1	..	..	..	2	..	1	..	4
Diarrhoea (infantile) *	..	..	..	..	..	..	..	..	..	1	6	4	11
Diphtheria	11	12	3	8	8	3	4	4	9	20	11	26	119
Dysentery, Amoebic	1	..	..	..	1	2	..	..	..	..	..	..	4
Dysentery, Bacillary	..	..	..	..	..	1	..	2	5	3	10	..	21
Encephalitis Lethar- gica	1	..	..	..	..	..	..	1	1	..	..	1	4
Filariasis .. ..	..	..	..	..	..	..	..	..	..	..	..	..	..
Lead Poisoning ..	..	..	2	..	..	..	..	1	..	..	..	..	3
Leprosy	1	..	..	..	..	..	1	..	..	1	2	..	5
Leptospirosis (Weil's Disease, Paraweil's Disease, Seven-day Fever)	16	..	..	2	..	..	1	..	..	1	2	..	22
Malaria	2	2	1	2	..	2	..	2	..	..	4	2	17
Meningitis, Cerebro- spinal	3	..	1	1	2	..	..	..	1	1	..	2	11
Mossman Fever ..	..	..	..	..	..	..	..	..	1	..	1	..	2
Plague, Bubonic or Oriental .. ..	..	..	..	..	..	..	..	..	..	..	..	..	..
Poliomyelitis, Acute Anterior	2	2	1	2	..	3	3	4	4	1	..	1	23
Puerperal Fever ..	..	..	..	..	..	..	1	1	..	1	1	..	4
Puerperal Pyrexia ..	1	..	1	2	..	1	1	1	..	1	5	..	13
Relapsing Fever ..	..	..	..	..	..	..	..	..	..	..	..	..	..
Sarina Fever ..	..	..	..	..	..	..	..	..	..	..	..	..	..
Scarlet Fever or Scar- latina	9	14	17	22	10	13	13	13	22	14	22	17	186
Smallpox (including Amaas or Alastrim)	..	..	..	..	..	..	..	..	..	..	..	..	..
Tuberculosis (all forms)	12	11	23	22	12	13	14	18	6	11	9	22	173
Tetanus .. ..	..	4	1	3	..	..	..	1	1	1	1	1	13
Typhoid Fever (in- cluding Paratyphoid Fever) .. ..	..	1	1	..	2	..	2	..	6	2	..	..	14
Typhus Fever (in- cluding Rural and Urban Forms and Japanese River Fever)	5	2	4	5	4	6	7	5	4	4	4	9	59
Undulant (Malta) Fever .. ..	..	..	..	..	..	1	..	..	..	..	..	1	2
Yellow Fever ..	..	..	..	..	..	..	..	..	..	..	..	..	..
Totals ..	67	49	55	72	41	46	47	55	63	62	81	88	726

* Diarrhoea for more than 48 hours' duration in children under 2 years of age was declared a notifiable disease with respect to the whole of the State of Queensland on 24th March, 1949, (*vide* Government Gazette 26-3-49, page 1066)

TABLE VIII.

NOTIFIED INCIDENCE OF COMMUNICABLE DISEASES IN QUEENSLAND (EXCLUSIVE OF VENEREAL DISEASES),
SECTION 29 OF "THE HEALTH ACTS, 1937-1948," DURING THE CALENDAR YEAR 1948.

Disease.	Cases Reported on Prescribed Form.			
	Metropolis.	Outside Areas.	Total Whole State, 1948.	Total Whole State, 1947.
Anchylostomiasis	5	18	23	12
Anthrax .. .. .	..	..	..	..
Bilharziasis .. .. .	..	..	..	..
Cholera .. .. .	..	..	..	..
Coastal Fever .. .. .	..	5	5	4
Diphtheria	26	127	153	456
Dysentery, Amoebic	2	5	7	5
Dysentery, Bacillary	32	2	34	24
Encephalitis Lethargica .. .. .	..	1	1	2
Filariasis .. .. .	..	..	..	2
Lead Poisoning	3	7	10	8
Leprosy .. .. .	..	9	9	8
Leptospirosis (including Weil's Disease, Paraweil's Disease, Seven-day Fever) .. .. .	..	19	19	8
Malaria	41	33	74	789
Meningitis, Cerebro-spinal	6	15	21	36
Mossman Fever .. .. .	..	5	5	4
Plague, Bubonic or Oriental .. .. .	..	..	..	..
Poliomyelitis, Acute Anterior	12	25	37	19
Puerperal Fever .. .. .	..	1	1	5
Puerperal Pyrexia	41	10	51	124
Relapsing Fever .. .. .	..	..	..	..
Sarina Fever .. .. .	..	..	..	..
Scarlet Fever or Scarlatina	144	226	370	473
Smallpox (including Amaas or Alastrim) .. .. .	..	..	..	..
Tetanus	17	11	28	33
Tuberculosis (all forms)	268	184	452	558
Typhoid Fever (including Paratyphoid Fevers)	3	12	15	14
Typhus Fever (including Rural and Urban Forms, and Japanese River Fevers)	10	54	64	63
Undulant (Malta) Fever .. .. .	..	1	1	1
Yellow Fever .. .. .	..	..	..	..
Totals	610	770	1,380	2,648

LEPROSY.

ERIC J. REYE, M.B., B.S. (Qld.), Medical Officer in Charge. F. MAHONY, Superintendent.

(A) LEPROSY IN THE WHITE POPULATION.

Table IX. shows that at the beginning of the year there were 52 patients at the Lazaret, Peel Island, and 59 at 30th June, 1949. Details of admissions, discharges, and deaths for the last three years are also given in this table.

TABLE IX.
SHOWING POPULATION CHANGES IN PATIENTS AT PEEL ISLAND LAZARET FOR LAST THREE YEARS.

	1946-47.			1947-48.			1948-49.		
	Male.	Female.	Total.	Male.	Female.	Total.	Male.	Female.	Total.
Population as at July 1.. ..	34	12	46	41	14	55	42	10	52
Admitted	11	3	14	7	1	8	10	3	13
Discharged	4	0	4	5	3	8	2	0	2
Died	0	1	1	1	2	3	4	0	4
Population as at June 30 ..	41	14	55	42	10	52	46	13	59
Increase	7	2	9	1	..	..	4	3	7
Decrease .. .. .	..	..	..	..	4	3	..	..	..

Although the number of patients detained in the lazaret has steadily increased, there is no need for disquiet. Of the 13 patients admitted during the year, 8 were readmissions of relapsed patients, and only 5 patients were new admissions. One of these patients probably acquired his infection outside the State. In fact, of the 59 patients now in the lazaret, 2 are Indonesians (admitted at the request of the Dutch Government), 27 are patients who have only been admitted once, and no less than 30 patients are readmissions (4 of these being admitted for the third time). The rate of readmissions is high, because the disease is chronic and because until recently treatment had little influence on the course of the disease. In the last few years the introduction of a new series of drugs—the sulphones—has changed the picture consider-

ably. Patients receiving sulphone thereapy respond quicker and effective treatment can be continued when they are discharged. It is expected that the relapse rate will be reduced when all patients on parole are treated with the new drugs. Arrangements are now being made for ex-patients to commence treatment with sulphones and all necessary drugs for treatment are made available to patients free of cost. It is much better (and cheaper) to keep an ex-patient free of the disease than to admit him to the lazaret for treatment of a relapse.

There is no statistical evidence to support the statement sometimes made that leprosy is increasing in the white population of this State. To give some idea of the incidence of the disease over the last twenty-five years reference should be made to Table X.

TABLE X.
SHOWING THE NUMBER OF CASES OF LEPROSY IN WHITE PEOPLE DIAGNOSED IN QUEENSLAND OVER THE LAST 25 YEARS IN QUINQUENNIAL PERIODS.

Quinquennial Period.	Readmissions to Lazaret.	First Admissions to Lazaret.	Mean Population of Queensland.	Number of First Admissions per annum per million of Population.
1-7-24 to 30-6-29	4	32	859,200	7.45
1-7-29 to 30-6-34	7	21	927,400	4.53
1-7-34 to 30-6-39	13	27	981,800	5.50
1-7-39 to 30-6-44	13	30	1,036,000	5.79
1-7-44 to 30-6-49	25	26	1,091,600	4.76

Over this period it will be noted that the average number of patients admitted for the first time each year per million of population has remained substantially unchanged, in spite of the fact that medical men, many of whom are Queensland graduates, are becoming increas-

ingly aware of the disease and that facilities for diagnosis are more readily available. It is the number of readmissions which may have given rise to the conjecture that the disease is more prevalent, but readmissions must be ignored when attempting to assess the true

incidence of the disease. Leprosy is certainly endemic in certain areas of the State, but in the white population, at any rate, it is not increasing.

The age composition of the 59 patients at present in the lazaret is as follows:—

Under 40 years	..	..	..	21
40–50 years	..	..	..	14
50–70 years	..	..	..	18
70–80 years	..	..	..	4
Over 80 years	..	..	..	2

The mean age of all patients was 48.9 years, as compared with a mean age of 47.3 years in 1947-48.

Details of the causes of death of the four patients who died during the year are seen in Table XI.

TABLE XI.

SHOWING DETAILS OF PATIENTS WHO DIED AT PEEL ISLAND LAZARET, 1948-49.

Sex.	Age.	Cause of Death.	Autopsy performed.
Male	42	Pyelonephritis, Leprosy..	Yes
Male	42	Toxaemia, Leprosy, Dementia	No
Male	60	Pneumonia, Fractured Femur, Leprosy ..	Yes
Male	94	Senility, Myocardial Degeneration, Leprosy	Yes

Treatment.—The use of the sulphone—diasone*—continues to give gratifying results. A very definite reduction in the number of bacilli in smears can be seen and nearly half the patients return negative smears in each batch taken. The periods of negative smears are also of longer duration—only a few of those present at the beginning of sulphone therapy are still showing heavy infections and all of these show clinical improvement in some degree.

During the year 37,523 tablets of diasone were used on patients at Peel Island, and 5,168 were issued to patients on parole, making a total of 42,691 tablets, equivalent to approximately 12,804 gm. as compared with 9,320 gm. used during the preceding year.

During the year a start was made on the treatment of previously paroled cases and of early non-infectious cases with another sulphone—sulphetrone (dicinnamyl sodium sulfonate diamino diphenyl sulphone)—and it is expected that more such cases will come under treatment during the next twelve months.

Laboratory.—Laboratory activities on Peel Island came to a halt during the year and have not yet been resumed. This was due to the resignation of the laboratory technician, followed shortly afterwards by that of her assistant. For the half year ended 31st December, 1948, they accomplished, *inter alia*, 447 haemoglobin estimations, 424 red cell counts, 410 white cell counts, 213 differential leucocyte counts, 426 examinations of urine (including microscopic examination). Pending restaffing of the laboratory, blood and urine examinations have been carried out (on specimens sent to Brisbane) by the Laboratory of Microbiology and Pathology.

*Disodium formaldehyde sulphonylate diaminodiphenyl sulfone.

As a result of closure of the laboratory it has not been possible to carry on several lines of research to provide data urgently needed for the efficient treatment of the disease, but this may be possible when new appointments, now made, have taken up duty. Data most urgently required concern sulphone concentrations in body fluids, carbohydrate metabolism in the disease (especially in the phase of allergic reaction), and on hepatic and gastric function.

Staff (Medical).—Due to resignations and illness Peel Island has been frequently short of nursing staff. At present the staff consists of matron and three trained nurses who, by dint of very hard work, manage to keep essential work going. It is expected that relief will be obtained shortly. The continued efforts of two and a-half years still fail to procure an additional medical officer.

Medical Records.—Some improvement in the medical records has occurred during the year, mainly as a result of moving into the renovated surgery, making it possible to introduce some sort of system to cover work from day to day.

(B) LEPROSY AMONG ABORIGINALS.

Population Statistics.—There are at present 73 patients on Fantome Island, all present on first admission. Table XII. shows the population changes that have taken place there during the past year.

TABLE XII.

SHOWING POPULATION CHANGES AT FANTOME ISLAND LAZARET FOR YEAR 1948-49.

—	Males.	Females.	Total.
In Lazaret 1 July, 1948	38	35	73
Admitted	8	2	10
Discharged	2	1	3
Died	4	3	7
In Lazaret 30 June, 1949	40	33	73
Increase	2	..	..
Decrease .. ..	..	2	..

Among the patients there are now seven married couples. During the year there were five births—four male and one female.

The average age of the patients found on survey about the middle of the year was approximately 28 years, the age range being from about 12 to 60 years.

Table XIII. shows the age and cause of death of the seven patients who died during the year.

TABLE XIII.

Sex.	Age.	Cause of Death.	Autopsy performed.
Female	24	Empyema, Leprosy ..	No
Male	23	Leprosy, Cardiac Failure	No
Female	33	Tuberculous Pneumonia, Miliary Tuberculosis, Leprosy	Yes
Male	50–60	Bronchopneumonia, Bronchiectasis, Leprosy	Yes
Male	34	Leprosy, Cardiac Failure	No
Male	50	Leprosy, Cardiac Failure	No
Female	53	Bronchopneumonia, Lung Abscess, Leprosy ..	Yes

As some part-time assistance was given to the medical officer at Peel Island it has been possible to extend supervision over the patients at Fantome Island, and sulphone therapy (with sulphetrone) was started during the year. At present 50 of the patients are receiving the drug. Improvement in the condition of a number of the patients is already visible and the number of dressings required has been reduced.

Sisters of the Franciscan Order continue to give devoted care to aboriginal lepers; their services are beyond praise.

(C) GENERAL REMARKS.

Treatment and Research.—During the year insulin and antihistaminic drugs were introduced as adjuncts to sulphone therapy. Both are used in the control of allergic reactions resulting from treatment, and their use has met with a fair degree of success.

The blood groups of all patients at Fantome Island were tested at the Commonwealth Health Laboratory at Townsville—all were Rh positive.

In view of certain antigenic similarities between *Mycobacterium leprae* and *Mycobacterium tuberculosis*, and in view of the probable tuberculin testing of large numbers of Queenslanders, Mantoux tests were made on the patients at both leprosaria. The results of this work are not yet complete and no deductions have as yet been made.

Records.—A little progress on the task of catching up on the systematising and correlation of past medical and epidemiological records was made during the first part of the year, but with the resignation of the laboratory staff (who also carried out the clerical work involved and took care of records of native cases) these are again in arrears.

New Buildings.—Further accommodation is required at Fantome lazaret to replace huts erected in 1941. Many of these are in very poor condition.

At Peel Island a 10-bed ward for patients who are helpless is about ready for occupation. This will make more huts available for active patients. Quarters for nurses and medical officers are newly constructed. The Main Roads Commission has almost completed an excellent road from the existing institution to the new jetty, and has also made roads at the proposed site for a new lazaret. Shrubs and trees have been planted in the grounds.

Welfare of Patients.—Every patient now receives a radio set on application. Motion pictures are shown once a week (twice weekly from the beginning of the next financial year). Patients can enjoy boating, swimming, tennis, and billiards. A library is provided. Several patients have interesting hobbies, such as wood-working and gardening. Regular church services have been held by the various religious denominations, while the Salvation Army Band, Brisbane Municipal Band, and Monty Bloom's concert party have given performances from time to time.

Although patients with leprosy are segregated every effort is made to make them contented. Over the last few years amenities and the general condition of the whole institution have been markedly improved, and some patients are not anxious to leave when the disease has been arrested. Modern treatment, including specialist attention at the Brisbane General Hospital, and the excellent accommodation and amenities available have caused a marked change in the attitude of the average patient to his disease. The majority are now quite content to stay until they are better.

SECTION OF ENTHETIC DISEASES.

GEOFFREY HAYES, M.B., Ch.M. (Sydney), Medical Officer in Charge;
BEATRICE WARNER, M.B., B.S. (Melb.), Medical Officer.

During the year 846 persons were notified (anonymously) as suffering from venereal disease, as compared with 1,000 for the previous year.

Of these 183 were females and 663 males, as compared with 243 and 757 respectively in the previous year. Of the cases 593 were gonorrhœal and 237 syphilitic, as compared with 670 and 317 respectively for the previous year.

If these figures of cases notified to the Department are a true index of venereal disease incidence

then they give room for considerable gratification, because it is the first time since 1914—when notification commenced—that the total State incidence has fallen below four figures. During three of the war years the civilian total did get below 1,000, but the figures for armed services personnel stationed in Queensland brought up the total to well above 1,000.

The following table XIV. dissects the incidence of notified venereal disease in Queensland for the 12 months under review:—

TABLE XIV.
INCIDENCE OF NOTIFIED VENEREAL DISEASE, 1948-49.

—	Metropolitan.		Outside Centres.		Whole State.		Total.
	Males.	Females.	Males.	Females.	Males.	Females.	
Gonorrhoea—							
Unspecified	11	4	22	5	33	9	42
Acute	355	58	74	8	429	66	495
Sub-acute	4	5	1	1	5	6	11
Chronic	3	22	2	2	5	24	29
Ophthalmia (Gonorrhoeal) ..	1	..	..	..	1	..	1
Vulvo-vaginitis .. .. .	..	9	..	2	..	11	11
Syphilis—							
Unspecified	1	7	1	6	2	13	15
Primary	66	10	18	3	84	13	97
Secondary	9	2	9	9	18	11	29
Tertiary	17	5	8	2	25	7	32
Latent	23	5	4	7	27	12	39
Neuro	7	4	1	1	8	5	13
Congenital or Heredo (pre-natal) Syphilis	3	2	2	1	5	3	8
Soft Sore	1	..	2	..	3	..	3
Venereal Warts	16	..	..	..	16	..	16
Ulcerative Granuloma	1	..	..	..	1	..	1
Syphilis and Gonorrhoea	1	2	..	1	1	3	4
Gonorrhoea and Venereal Warts ..	..	..	..	..	..	..	..
	519	135	144	48	663	183	846
Grand Totals	654		192		846		

It will be seen from Table XIV. that 654 cases were notified from Brisbane, 570 of them coming from the two ad hoc clinics. The following table XV. shows the spread of incidence for the rest of the State, totalling 192 cases. Of the larger towns it would seem that Mackay, Rockhampton, and Townsville have a larger incidence than the other corresponding seaport of Cairns. Toowoomba, Maryborough, and Bundaberg are apparently fairly moral cities, whilst Warwick is almost free of venereal disease.

TABLE XV.

AREAS OUTSIDE METROPOLIS FROM WHICH CASES ARE NOTIFIED.

—				Males.	Females.	Total.
Alberton	..	..	..	1	..	1
Atherton	..	..	..	3	..	3
Ayr	..	..	..	2	..	2
Baralaba	..	..	..	3	2	5
Bundaberg	..	..	..	4	1	5
Cairns	..	..	..	7	3	10
Charleville	..	..	..	1	..	1
Cunnamulla	..	..	..	3	2	5
Gayndah	..	..	..	1	..	1
Goondiwindi	..	..	..	..	1	1
Gordonvale	..	..	..	1	..	1
Gladstone	..	..	..	4	..	4
Hughenden	..	..	..	1	..	1
Ingham	..	..	..	1	..	1
Innisfail	..	..	..	4	3	7
Ipswich	..	..	..	0	1	1
Julia Creek	..	..	..	1	0	1
Mackay	..	..	..	19	13	32
Mareeba	..	..	..	2	..	2
Margate (via Redcliffe)	..	..	..	1	..	1
Maryborough	..	..	..	9	..	9
Mossman	..	..	..	1	..	1
Mount Isa	..	..	..	2	1	3
Mount Morgan	..	..	..	2	..	2
Mundubbera	..	..	..	..	1	1
Nambour	..	..	..	1	2	3
Normanton	..	..	..	6	..	6
Proserpine	..	..	..	2	..	2
Rockhampton	..	..	..	21	3	24
Roma	..	..	..	1	1	2
Southport	..	..	..	2	1	3
Thursday Island	..	..	..	4	1	5
Toowoomba	..	..	..	11	2	13
Townsville	..	..	..	15	9	24
Warwick	..	..	..	1	..	1
Yeppoon	..	..	..	1	..	1
Unstated	..	..	..	6	1	7
				144	48	192

There are two factors operating against the spread of venereal disease—firstly, the universal availability of penicillin, which is so remarkably effective against gonorrhœa; and secondly, the contact case finding activities of the Department in seeking out sources and contacts of infections.

At the male clinic in Hope street, which accounts for more than 54 per cent. of the total notifications for the State, a considerable number of private contacts become known and are subsequently brought under treatment, and the regular weekly examinations of prostitutes has reduced infections from this source to relatively few cases.

Table XVI. gives the alleged sources of the 846 infections.

TABLE XVI.
SOURCES OF INFECTION.

Amateurs	..	..	..	..	476
Unknown	..	..	..	..	298
Professional prostitutes	..	..	..	..	23
Wives	..	..	..	..	12
Husbands	..	..	..	..	12
Parents	..	..	..	..	11
Occupational (professional prostitutes)	..	..	..	..	10
Gins	..	..	..	..	3
E. C. (Extra-genital)	..	..	..	..	1
					846

The following table gives the sources of notification:—

TABLE XVII.
SOURCES OF NOTIFICATION.

Private practitioners	..	..	..	96
Clinics	..	..	..	636
Hospitals	..	..	..	114
				846

Ratio of private cases to public cases—1 : 7·8.

CONTACT CASE FINDING.

A major development in recent years of the Enthetic Diseases Section has been contact case finding. During the year particulars concerning 83 alleged sources or contacts of venereal disease infections were obtained. With 11 outstanding questionnaires from 1947-48 this made a total of 94 to be traced, with the following outcome:—

Contracted directly or with the co-operation of consorts				49
Forwarded to Police for tracing				38
Interstate (no action possible)				4
Insufficient particulars				3
				94

Of the 38 cases referred for tracing, 19 could not be traced and 19 were contacted and attended for examination, thus making a total of 68 cases (49 + 19) for examination as venereal disease suspects. The following were the results of these examinations:—

Found positive for venereal disease	..	58
Found negative for venereal disease	..	6
Still in doubt at 30th June	..	4
		68

These activities may be considered highly satisfactory and bear more than favourable comparison with similar contact case finding activities elsewhere, such as the United States of America, and are certainly unique amongst the Australian States.

These activities, together with the use of penicillin, have undoubtedly constituted the major factors in the apparent improvement in venereal disease incidence in this State.

Tables XVIII. and XIX. give the age incidence and marital status of these 846 cases:—

TABLE XVIII.
AGE INCIDENCE.

—				Males.	Females.	Total.
Unknown	..	..	..	22	13	35
Under 1 year	..	..	..	3	1	4
1-5 years	..	..	..	1	4	5
6-10 years	..	..	..	1	3	4
11-15 years	..	..	..	..	6	6
16-20 years	..	..	..	76	29	105
21-25 years	..	..	..	240	42	282
26-30 years	..	..	..	109	30	139
31-35 years	..	..	..	77	20	97
36-40 years	..	..	..	39	12	51
41-45 years	..	..	..	32	5	37
46-50 years	..	..	..	30	5	35
51-55 years	..	..	..	11	5	16
56-60 years	..	..	..	11	4	15
61-65 years	..	..	..	7	3	10
Over 65 years	..	..	..	5	..	5
				664	182	846

TABLE XIX.
MARITAL STATUS.

—				Males.	Females.	Total.
Married	..	..	..	139	74	213
Single	..	..	..	492	77	569
Separated	..	..	..	10	7	17
Widowed	..	..	..	9	7	16
Divorced	..	..	..	1	5	6
Unknown	..	..	..	8	17	25
				659	187	846

HOPE STREET CLINIC (MALES).
This clinic, situated at 113 Hope street, South

Brisbane, caters for cases of venereal disease in males in the Brisbane area. There are, of course, many cases investigated and treated here which subsequently are found not to be suffering from a notifiable form of venereal disease, but the ready accessibility and equipment, &c., of this clinic make it the ideal centre for dealing with these cases.

Hope street also is the main centre for clinical instruction of medical students in Brisbane, and to this end every endeavour is made to keep the work up to teaching standards.

Tables XX. and XXI. cover the activities of this clinic and are self-explanatory:—

TABLE XX.

—								1947-48.	1948-49.	—	
New Cases	..	..	..	..	..	..	..	1,312	1,037	Decrease	275
Attendances	..	..	..	..	..	..	..	9,119	8,614	Decrease	505
Notifications—											
Syphilis, Early	..	..	..	..	..	..	..	131	77		
Syphilis, Late	..	..	..	..	..	..	..	21	16		
Gonorrhoea	..	..	..	..	..	..	..	152	93	Decrease	59
Venereal Warts	..	..	..	..	..	..	..	376	345	Decrease	31
Soft Sore	..	..	..	..	..	..	..	14	16	Increase	2
	..	..	..	..	..	..	..	..	2	Increase	2
Total	..	..	..	..	..	..	..	542	456	Decrease	86
Blood Tests—											
Wassermann and other tests for Syphilis	..	..	..	..	..	..	..	2,172	1,798		
Complement Fixation Gonorrhoea	..	..	..	..	..	..	..	1,130	932		
	..	..	..	..	..	..	..	3,302	2,730	Decrease	572
Smears—											
Examined at Hope Street	..	..	..	..	..	..	..	2,005	1,656		
Examined at Laboratory	..	..	..	..	..	..	..	560	416		
Total	..	..	..	..	..	..	..	2,565	2,072	Decrease	493
Dark Ground (performed in clinic)	..	..	..	..	..	..	..	116	212	Increase	96
Treatments—											
Penicillin	..	..	..	..	..	..	..	2,123	1,454		
N.A.B.	..	..	..	..	..	..	..	1,398	935		
Bismol	..	..	..	..	..	..	..	1,530	1,053		
	..	..	..	..	..	..	..	5,051	3,442	Decrease	1,609
Reminders	..	..	..	..	..	..	..	254	218	Decrease	36
Final Notice	..	..	..	..	..	..	..	93	95	Increase	2
Police Action	..	..	..	..	..	..	..	186	149	Decrease	37

TABLE XXI.
MONTHLY NOTIFICATIONS, 1948-49.

	Syphilis.										Unspecified.	Gonorrhoea.					Venereal Warts.	Soft Sore.	Total Notifications for Each Month.
	Early.				Late.														
	Primary.	Early Secondary.	Early Latent.	Total.	Late Secondary.	Tertiary.	Neuro.	Heredo or Congenital.	Latent (Late Latent.)	Total.		Rectal.	Acute.	Chronic.	Sub-acute.	Total.			
July	7	..	1	8	..	..	..	..	1	1	..	..	20	..	1	21	2	..	32
August	6	1	1	8	..	1	..	..	..	1	..	..	28	..	..	28	2	1	40 (72)
September ..	4	..	1	5	..	..	..	..	..	..	..	..	35	..	..	35	..	..	40 (112)
October	4	2	..	6	..	1	..	..	..	1	..	..	30	1	2	33	1	..	41 (153)
November ..	6	1	..	7	..	..	..	..	..	..	..	..	28	..	..	28	..	..	35 (188)
December ..	5	..	1	6	..	..	..	..	4	4	..	..	38	..	..	38	1	..	49 (237)
January	3	1	..	4	..	..	..	..	2	2	..	..	29	..	1	30	..	..	36 (273)
February ..	3	..	2	5	..	..	..	..	1	1	..	..	30	..	..	30	3	1	40 (313)
March	11	1	1	13	..	2	..	..	2	4	..	..	25	..	..	25	5	..	47 (360)
April	4	..	1	5	..	..	..	..	..	..	..	..	33	..	..	33	..	..	38 (398)
May	4	..	1	5	..	1	1	..	..	2	..	..	20	1	..	21	2	..	30 (428)
June	4	..	1	5	..	..	..	..	..	..	..	..	23	..	..	23	..	..	28 (456)
Totals for Year	61	6	10	77	..	5	1	..	10	16	..	..	339	2	4	345	16	2	456

FEMALE CLINIC.

This clinic is situated conveniently in a quiet portion of the city area and its staff conducts a threefold activity:—

- (1) An ad hoc clinic for females (women's clinic);
- (2) Weekly examination of prostitutes (William street annexe);
- (3) Treatment of venereal disease in females at H.M. Prison.

Tables XXII., XXIII., and XXIV. following cover these various activities:—

TABLE XXII.

NOTIFICATIONS FROM WOMEN'S CLINIC.				
Gonorrhoea—				
Acute	51			
Sub-acute	6			
Chronic	17			
Treated	1			
				75
Syphilis—				
Primary	5			
Secondary	1			
Tertiary	1			
Latent	9			
Treated	14			
				30
Secondary Syphilis and Sub-acute Gonorrhoea	1			
Treated Syphilis and Chronic Gonorrhoea	1			
				107
NOTIFICATIONS FROM H.M. PRISON—				
Gonorrhoea—				
Sub-acute	1			
Chronic	4			
				5
Syphilis—				
Primary	1			
Early Latent	1			
				2
				7

Two contacts of male patients suffering from early syphilis were given prophylactic treatment.

Of the above 107 notifications, 8 were those of professional prostitutes, as follows:—

Gonorrhoea—				
Acute	6			
Chronic	1			
				7
Syphilis—				
Treated Syphilis	1			
				1
				8

TABLE XXIII.

RECORD OF ACTIVITIES, WOMEN'S CLINIC.				
Total Interviews	2,795			
New Cases	170			
Notifications	114			
Arsenical Injections	292			
Bismuth Injections	668			
Vaccine Injections	45			
Penicillin Injections	572			
Smears	2,052			
Bloods	577			
Dark Grounds	21			
Trichomonas	18			
Number of Cultures	1,413			
Patients Cultured	474			
Discharged	29			

TABLE XXIV.

RECORD OF ACTIVITIES, WILLIAM STREET ROOMS. (Examination and Treatment of Prostitutes.)				
Number of Interviews	1,521			
Number of Examinations	1,477			
National Security Orders	3			
Bloods Taken	273			
Arsenic Injections	11			
Bismol Injections	34			
Dark Grounds	9			
Smears	4,442			
Number of Cultures	30			
Patients Cultured	10			

The medical officers at these two clinics (male and female) hold clinical appointments in the Urological section, Brisbane General Hospital, and Ante-Natal Section, Brisbane Women's Hospital, respectively, and this is a considerable help in maintaining a liaison with colleagues and retaining perspective in clinical work. Also the ready availability of beds in the General Hospital, Wattlebrae, and Children's Hospital for cases needing hospitalisation is a great help and is much appreciated.

SECTION OF PUBLIC HEALTH SUPERVISION.

Deputy Director-General of Health and Medical Services: D. W. JOHNSON, M.B., B.S., D.T.M. & H.

Chief Inspector of Food and Drugs: C. M. CATO.

Chief Sanitary Inspector: W. McNEIL.

Clerical and Statistical Branches: T. O'SHEA, M.R.San.I.

Welfare Officer: Mrs. V. WILLS.

FOOD AND DRUGS.

During the fiscal year 1948-49 the work of this Division has continued upon the usual lines, and has consisted throughout the entire State of the enforcement of the provisions of Part IV. of the Health Acts (Food and Drugs), The Food and Drug Regulations, Milksellers' Regulations, Health (Food Supply) Regulations, Health (Insecticide) Regulations, and the Poisons Regulations.

MILK.

The work of milk sampling and inspections in the Brisbane metropolitan area has been carried out by one inspector and an assistant inspector. As in previous years, the work has been directed along the main channels—viz., sampling for both bacteriological and chemical analysis, inspection of vehicles and premises, and special investigations.

Two thousand one hundred and twenty-nine legal samples of milk were obtained by the headquarters staff for chemical analysis. Included in this total are 155 samples obtained from the following centres:—Bundaberg, Gympie, Kingaroy, Maryborough, Mitchell, Monto, Pialba, Roma, Tamborine, and Woodford. The remaining 1,974 were secured in Greater Brisbane, South Coast, Ipswich, and Rosewood areas, Redcliffe, and the North Coast districts. Details of analyses will be found in the report of the Government Analyst.

Prosecutions.—Fifty-six prosecutions, all of which were successful, were instituted against milk vendors for breaches of the Health Acts, Milksellers' Regulations, and Food and Drug Regulations. Penalties amounted to:—Fines, £394 6s.; and costs, £66 16s. 6d.

Pasteurised Milk.—The consumption of pasteurised milk continues to increase. Of Brisbane's estimated milk consumption of 40,000 gallons daily, no less than 34,000 gallons is

now pasteurised, and of this 26,000 gallons is bottled pasteurised milk. Ten years ago only 4,000 gallons of Brisbane's milk was pasteurised. Pasteurised milk is safe, and has better keeping qualities than raw milk.

Samples of pasteurised milk taken from the different milk factories and various vendors were found, with few exceptions, to be satisfactory. During the year a further milk pasteurisation plant commenced to operate in Brisbane, bringing the number of such factories in the metropolis to five. Pasteurised milk is also produced and sold in bottles at Southport, Booval (Ipswich), Toowoomba, Rockhampton, Innisfail, and Cairns.

Up-to-date machinery for washing bottles has been installed at pasteurised milk factories, and fewer complaints of pasteurised milk being contained in dirty bottles were received from the public during the year. One company was proceeded against for the offence of selling pasteurised milk in a bottle that was not clean.

Remarks on Prosecutions.—There were 25 prosecutions for the sale of milk adulterated with water, 16 of which were in connection with the milk supply of the Brisbane area and its environs. The other 9 were from the milk supplies of Boonah, Bundaberg, Maryborough, and Nambour.

The range of added water was 5 per cent. to 40 per cent.

Two milk vendors were proceeded against for the sale of milk deficient in fat, whilst 29 prosecutions were successfully launched against vendors of milk for breaches of the Health Acts and Regulations made thereunder, for selling milk containing excess bacteria, selling milk under improper conditions in regard to vehicles and utensils, and selling milk without the necessary license.

TABLE XXV.

PROSECUTIONS FOR MILK ADULTERATION (ADDED WATER) FOR THE YEAR 1948-1949. (HEADQUARTERS).

Date.	Place.	Percentage of Added Water.	Fines.	Costs.
		Per Cent.	£ s. d.	£ s. d.
1948—				
14th July	Boonah	21.0	20 0 0	1 7 0
26th July	Maryborough	35.0	20 0 0	1 7 0
24th August	Brisbane	8.1	8 2 0	1 7 0
24th August	Brisbane	26.8	20 0 0	1 7 0
8th September	Nambour	21.8	20 0 0	3 11 6
8th September	Nambour	40.0	20 0 0	1 7 0
28th September	Brisbane	6.0	6 0 0	1 7 0
20th October	Brisbane	6.4	7 0 0	1 7 0
27th October	Nambour	6.5	7 0 0	1 7 0
9th December	Brisbane	23.0	20 0 0	5 13 0
14th December	Maryborough	6.4	7 0 0	1 7 0
21st December	Brisbane	5.0	5 0 0	1 7 0
1949—				
19th January	Caboolture	9.7	10 0 0	1 7 0
19th January	Caboolture	8.5	9 0 0	1 7 0
26th January	Nambour	13.0	20 0 0	1 7 0
22nd February	Brisbane	11.4	11 0 0	1 7 0
10th March	Brisbane	7.7	7 14 0	1 7 0
14th March	Cleveland	21.0	20 0 0	1 7 0
11th April	Ipswich	7.0	10 0 0	1 7 0
19th April	Woodford	5.0	5 0 0	1 7 0
19th April	Woodford	12.7	13 0 0	1 7 0
13th May	Beaudesert	7.0	7 0 0	1 1 0
13th May	Beaudesert	13.0	13 0 0	1 1 0
24th May	Bundaberg	13.0	13 0 0	2 8 0
24th May	Bundaberg	13.0	13 0 0	2 8 0
Totals .. ..	.. ..	..	£311 16 0	£41 15 6

MILK PROSECUTIONS FOR FAT DEFICIENCY (HEADQUARTERS).

Date.	Place.	Basis of Prosecution.	Fines.	Costs.
1949—			£ s. d.	£ s. d.
12th April	Brisbane	24·2 per cent. deficient in fat	5 0 0	1 7 0
22nd June	Brisbane	24·2 per cent. deficient in fat	3 0 0	1 7 0
		Totals	£8 0 0	£2 14 0

MISCELLANEOUS MILK PROSECUTIONS.

Date.	Place.	Basis of Prosecution.	Fines.	Costs.
1948—			£ s. d.	£ s. d.
9th July	Redcliffe	Milk tap not protected	4 0 0	1 7 0
9th July	Redcliffe	Name, address and license number not on vehicle	2 0 0	1 7 0
9th July	Redcliffe	Measure without close-fitting lid	4 0 0	1 7 0
14th July	Nambour	Water in milk receptacle	1 0 0	3 9 0
28th September ..	Brisbane	Pasteurised milk containing 140,000 micro-organisms and E. Coli	2 0 0	2 8 0
18th October	Ipswich	Name, address, license number, &c., not on vehicle	1 10 0	0 6 0
18th October	Ipswich	Name, address, license number, &c., not on vehicle	1 10 0	0 6 0
18th October	Ipswich	Milk tap not protected from dust	1 0 0	0 6 0
18th October	Ipswich	Milk tap not protected from dust	1 10 0	0 6 0
18th October	Ipswich	Measure without close-fitting lid	1 10 0	0 6 0
20th October	Brisbane	Name, address and license number not on vehicle	2 10 0	0 6 0
20th October	Brisbane	Milk tap not protected from dust	5 0 0	0 6 0
20th October	Brisbane	Unsuitable milk vehicle.. ..	5 0 0	0 6 0
5th November	Redcliffe	No milk license	2 0 0	0 6 0
5th November	Redcliffe	Unsuitable milk vehicle.. ..	1 0 0	0 6 0
5th November	Redcliffe	Milk tap not protected from dust	1 0 0	0 6 0
5th November	Redcliffe	Name, address and license number not on vehicle	2 0 0	0 6 0
8th December	Brisbane	Name, address and license number not on vehicle	0 10 0	0 6 0
1949—				
17th January	Brisbane	No milk license	2 0 0	0 6 0
9th February	Nambour	Milk tap not protected from dust	3 0 0	0 6 0
15th February	Brisbane	No milk license	2 0 0	1 7 0
15th February	Brisbane	Name, address and license number not on vehicle	2 0 0	1 7 0
15th February	Brisbane	Milk tap not protected from dust	3 0 0	1 7 0
15th February	Brisbane	Milk tap not protected from dust	3 0 0	1 7 0
10th March	Brisbane	No milk license	1 0 0	0 6 0
20th April	Brisbane	Milk tap not protected from dust	2 10 0	0 6 0
28th April	Brisbane	Dirty milk bottle used in sale of pasteurised milk	10 0 0	1 7 0
18th May	Brisbane	Name, address and license number not on vehicle	3 0 0	0 6 0
18th May	Brisbane	Unsuitable milk vehicle.. ..	4 0 0	0 6 0
		Totals	£74 10 0	£22 7 0

SPIRITUOUS LIQUORS.

Hotel inspections included the testing of the alcoholic strength of spirits offered for sale. In four instances legal proceedings were launched against the licensee for having spirits adulterated with added water, whilst one publican was fined for selling rum which was not “true to label.”

As a result of notices served on licensed victuallers, hotel bars in the Greater Brisbane area and in other cities and towns are now fitted

with automatic glasswashing machines to which hot-water cisterns are connected. The improved and more hygienic method of cleansing drinking glasses is appreciated by the hotelkeeper and the public alike.

During the year the Food and Drug Regulations were amended to require that all waste beer in hotel bars be coloured with a violet dye. This legislation is necessary because of the insanitary practice of some hotelkeepers in serving beer drippings and overflow from glasses to customers.

TABLE XXVI.
LIQUOR PROSECUTIONS FOR YEAR 1948-49 (HEADQUARTERS).

Date.	Place.	Basis of Prosecution.	Fines.	Costs.
1948—			£ s. d.	£ s. d.
7th July	Murgon	Whisky, adulterated with 5·8 per cent. added water	2 0 0	6 12 0
7th July	Murgon	Rum, not true to label	2 0 0	6 12 0
19th July	Beenleigh	Brandy, adulterated with 4·5 per cent. added water	2 0 0	1 7 0
19th July	Beenleigh	Rum, adulterated with 6·5 per cent. added water	2 0 0	1 7 0
29th September ..	Toogoolawah ..	Brandy, adulterated with 3·4 per cent. added water	3 0 0	1 7 0
		Totals	£11 0 0	£17 5 0

NOTE.—In each instance the stipendiary magistrate ordered that the hotelkeeper’s license be endorsed and that the premises be placarded for fourteen days with a copy of the conviction.

BREAD.

During the year two surveys of the quality of Brisbane's bread supply were undertaken, the results of which are detailed in the report of the Government Analyst. Where bakers were found to be making bread below average quality they were advised of the necessity of securing an improvement in the same.

The weighing of bread was also carried out, and as a result one baker was fined for having in his possession bread that was deficient in

its due weight. A baker was proceeded against for having refused to allow an officer to enter his bakehouse for the purpose of weighing bread.

Samples of wholemeal and brown breads were obtained by our officers and, as a result of analyses, two bakers were prosecuted for having sold brown bread, and one baker for having sold wholemeal bread, which was deficient in the proportion of wholemeal flour required to be present.

TABLE XXVII.
BREAD PROSECUTIONS FOR THE YEAR 1948-49—(HEADQUARTERS).

Date.	Place.	Basis of Prosecution.	Fines.	Costs.
1948—			£ s. d.	£ s. d.
28th July ..	Brisbane ..	Brown bread deficient in wholemeal flour ..	4 0 0	1 7 0
22nd September ..	Brisbane ..	Bread deficient in due weight ..	7 0 0	3 10 0
14th December ..	Maryborough ..	Brown bread deficient in wholemeal flour ..	5 0 0	1 7 0
1949—				
15th March ..	Wynnum ..	Bread deficient in due weight ..	17 5 0	2 15 0
23rd March ..	Wynnum ..	Wholemeal bread deficient in wholemeal flour	5 0 0	1 7 0
27th June ..	Brisbane ..	Obstruction of an officer ..	5 0 0	3 9 0
Totals ..			£43 5 0	£13 15 0

FISH SUPPLY.

Supervision of Brisbane's fish supply was maintained by two inspectors stationed at the fish market. Some 66 tons of different species of fish were condemned and destroyed by these officers on the score of being unfit for human consumption. The following is a detailed list of fish so condemned:—

TABLE XXVIII.
FISH CONDEMNED AND DESTROYED AT THE FISH BOARD MARKET, SOUTH BRISBANE, FOR YEAR ENDING 30TH JUNE, 1949.

Class of Fish.	Weight.			
	T.	C.	Q.	L.
Barramundi ..	0	0	0	16
Black King ..	0	0	1	0
Bonito ..	0	0	0	14
Bream ..	2	16	1	10
Catfish ..	0	0	0	26
Cod ..	0	4	0	25
Coral Bream ..	0	0	1	12
Flathead ..	0	4	2	8
Garfish ..	1	12	2	20
Herrings ..	0	0	1	6
Jew ..	0	0	2	27
John Dory ..	0	6	1	19
Leather Jacket ..	0	1	1	20
Long Tom ..	0	2	2	8
Mackerel ..	0	17	2	10
Mauri Cod ..	0	0	0	3
Mixed Fish ..	1	12	2	7
Morwong ..	0	0	1	24
Mullet ..	50	16	3	19
Parrot ..	0	0	3	24
Perch ..	0	1	1	4
Pike ..	0	0	2	2
Ray ..	0	2	1	22
Red Emperor ..	0	1	0	13
Salmon ..	0	0	1	1
Sawfish ..	0	1	1	17
Schnapper ..	2	1	2	2
Shark ..	0	6	2	8
Squire ..	0	2	0	16
Sweet Lip ..	0	8	0	5
Tailer ..	1	16	1	7
Trevalli ..	0	8	3	25
Trout ..	0	0	0	19
Trumpeter ..	0	0	3	21
Turrum ..	0	0	1	20
Whiting ..	1	0	2	7
Yellow Tail ..	0	8	3	0
Total ..	66	0	1	11
also:—				
Oysters ..	6	sacks		
Squid ..	49	lb.		
Sole ..	2	lb.		
Sand Crabs ..	802			
Prawns ..	4 tons 17 cwt. 2 qrs. 3 lb.			

CAFES.

An overall improvement in the cleanliness and general conduct of cafes in the city area was manifest. Notices were served on occupiers where breaches of the Regulations were found, and in the great majority of cases they were promptly complied with. Prosecutions for having dirty premises and dirty cooking utensils, however, are pending against two pastrycooks.

Many structural alterations to cafe premises are required to improve ventilation and provide food storage facilities, and it is hoped in the ensuing year that more materials will be available to permit of these important works being undertaken.

GENERAL INSPECTIONS.

Visits were made by the Headquarters' staff to all classes of food premises, including warehouses, retail stores, food factories, bond and free stores, auction marts, wharves, and other premises.

As a result of contact with wholesale general merchants the quality of numerous food lines has been checked and a close scrutiny focussed on labelling and advertising claims.

Inspection of the small mixed-business shops revealed that a number of the occupiers were failing to protect properly contaminable food from flies and dust. These shops are continually changing hands, and frequent visits of inspection are, therefore, rendered necessary in order to advise occupiers of their obligations under the Food and Drug Regulations. One storekeeper, who failed to benefit by repeated warnings, was prosecuted and fined for exposing food to contamination.

The Commonwealth Disposals Commission has shared the services of officers in examining stocks of drugs and poisons prior to auction in order to ensure that restricted drugs did not fall into unauthorised hands.

The conditions under which food for sale was prepared and served to the public at the Royal National Association's annual exhibition was given attention and, as a result of conferences with R.N.A. officers, a further step-up in general hygiene is anticipated.

UNSOUND AND DETERIORATED FOODS.

Inspection resulted in the removal from sale and destruction of some 8 tons 9 cwt. 2 qr. 2 lb. of unsound and deteriorated foods and drugs. A detailed list of these articles is given below:—

TABLE XXIX.

UNSOUND FOOD DESTROYED FOR YEAR 1948-49
(HEADQUARTERS).

Article.	Quantity.	Weight.			
		T.	C.	Q.	L.
Barley	1 sack	0	1	1	20
Biscuits	23 packages	0	2	1	1
Cakes	9 packages	0	0	0	24
Cereals	5 packages	0	0	0	5
Chutney	64 bottles	0	0	1	15
Cocoa	17 packages	0	0	0	5
Coffee	37 bottles	0	0	0	22
Confectionery ..	22 packets	0	0	0	1
Cordials, soft drinks	189 bottles	0	0	1	14
Curry Powder ..	4 packets	0	0	0	1
Custard Powder ..	1,145 packets	0	3	1	22
Disinfectants, poisons, &c. ..	5 bottles	0	0	0	1
Enriched Food ..	1 packet	0	0	0	1
Fish : tinned, dried, smoked	2,736 tins	0	8	0	3
Flour	34 packages	1	5	0	0
Fruit : tinned, packeted, preserved	1,434 packages	1	15	2	22
Ices and Ice Cream	85 packets	0	0	0	12
Jams and Preserves	89 packages	0	1	0	0
Jellies, Jelly Crystals and Junkets ..	2,646 packages	0	1	1	25
Macaroni	444 packets	0	3	3	24
Meat Extracts ..	334 tins	0	0	1	15
Meat, tinned ..	356 tins	0	3	0	19
Mustard	460 jars	0	2	0	8
Nuts	57 packages	2	16	2	0
Pastes and Spreads	3,539 jars	0	3	0	4
Pickles	38 bottles	0	0	1	3
Preservatives ..	6 packages	0	0	0	1
Puddings and Pies	149 packets	0	0	3	8
Sago	1 sack	0	1	0	8
Salt and Saltpetre	30 packages	0	0	0	8
Sauces	358 bottles	0	2	0	21
Soups, tinned and packeted ..	160 articles	0	7	2	12
Spices	105 packets	0	0	0	12
Sugar, Icing Sugar	10 bags	0	6	1	0
Syrup and Treacle	6 packages	0	0	0	4
Tea	2 packets	0	0	0	2
Vegetables and Vegetable Ex-tracts	212 packages	0	2	3	24
Vinegar	5 bottles	0	0	0	6
Yeast	2,724 packages	0	0	0	21
Total .. ..	.. ..	8	10	2	2

TABLE XXX.

PROSECUTIONS FOR MISCELLANEOUS BREACHES OF HEALTH ACTS AND REGULATIONS FOR YEAR 1948-49
(HEADQUARTERS.)

Date.	Place.	Basis of Prosecution.	Fines.			Costs.		
			£	s.	d.	£	s.	d.
1948—								
10th November ..	Brisbane	Pickles, adulterated with 13·9 grains of sulphur dioxide per lb.	10	0	0	1	7	0
30th November ..	Brisbane	Bread delivered in an upholstered vehicle ..	1	0	0	0	6	0
14th December ..	Maryborough ..	“ Grapefruit ” beverage falsely described ..	5	0	0	1	7	0
1949—								
3rd March	Brisbane	Excess lead in paint used on verandah door..	5	0	0	1	7	0
24th May	Bundaberg ..	Food stored close to open sanitary convenience	4	0	0	2	11	0
13th June	Brisbane	Food exposed to contamination	1	0	0	..		
Totals			£26	0	0	£6	18	0

POISONS AND DANGEROUS DRUGS.

Control has been exercised over the packing, sale, and use of poisonous substances and dangerous drugs. There appears a general desire on the part of professional men and traders to co-operate with the Department in securing compliance with “The Poisons Regulations of 1947.”

In addition—

- 20,041 articles of confectionery.
- 598 bottles of patent medicines.
- 1,212,684 cigarettes.
- 3,926 cigars.
- 1 ton 2 cwt. 2 qrs. 4 lbs. tobacco.

As a result of samples submitted to this Department by the Commonwealth Department of Commerce 1,500 dozen weasands held at a local meatworks were destroyed. The weasands were found to be contaminated by grass and other undigested fodder, and consequently not suitable for use as sausage casings.

SAMPLING.

During the year inspectors of the Headquarters’ staff submitted 4,698 samples to the Government chemical laboratory for analysis. These samples included bay rum, beer, beverages, butter, bread, cereals, cheese, chutney, crayons and pastels, condiments, cosmetics, cream-of-tartar, custard powders, disinfectants, drugs and medicines, essences, fish, flour, fireworks, fruit and fruit juices, hair lotions, insect sprays and powders, jams and jellies, linseed oil, jelly crystals, malt, meat, mustard, milk, milk products, nuts, paint, pickles, rat poison, sauces, spirituous liquor, soap, tea, tobacco, toys, vinegar, and miscellaneous articles.

Two thousand and twenty-three specimens were submitted to the Department’s bacteriological laboratory for examination, and included antiseptics, bottles, bread, carrot juice, cigarettes, condensed milk, cordial extract, corned meat, disinfectants, ice-cream, ice-cream scoop rinse water, lemonade, lime flavour and soda, meat pie, milk, olives, oysters, pineapple cordial, pineapple juice, soap, &c.

Where breaches of the dangerous drug law were committed by medical practitioners and chemists it was found that such were not in defiance of requirements but rather occurred through carelessness or oversight on their part, and prompt attention followed any matter to which their notice was directed.

Wrongly packed and labelled substances located by our officers were brought into harmony with the law by the packers concerned on representation being made from this office.

The Poisons Regulations were amended to permit Local Authorities and Rat Boards to handle poisons without the necessity of securing a license. An amendment also prohibited the sale of fireworks which contain arsenic or other scheduled poison.

A rat poison containing alpha-naphthylthiourea (A.N.T.U.) was packed in collapsible tubes and closely resembled toothpaste in appearance, and in order that the use of tubes resembling toothpaste containers could be prohibited for this pest exterminator the substance was placed in Schedule III. of the Regulations.

The drugs aureomycin, chloromycetin, streptomycin, and other antibiotic substances were added to the list of restricted drugs which may be supplied only upon the prescription of a doctor.

VISITS TO COUNTRY CENTRES.

Apart from inspectorial work carried out in the metropolis, visits by the headquarters' staff were made to the following outside centres:—Amberley, Appletree Creek, Bauple, Bargara, Beaudesert, Beechmont, Beenleigh, Beerwah, Biggenden, Bilinga, Bingera, Binjour, Boonah, Booval, Booyal, Bundaberg, Burleigh Heads, Caboolture, Childers, Cleveland, Caloundra, Coominya, Coolangatta, Cooroy, Cordalba, Crawford, Cunnamulla, Currumbin, Dayboro, Ebbw Vale, Elliott Heads, Eidsvold, Esk, Eumundi, Ferndale, Forest Hill, Gatton, Gayndah, Gin Gin, Gooroolba, Grantham, Gunalda, Gundiah, Goomeri, Gympie, Harlin, Harrisville, Ipswich, Kilkivan, Kingaroy, Landsborough, Lawnton, Lowood, Maroochydore, Maryborough, Merrimac, Mermaid Beach, Mitchell, Miriam Vale, Monto, Mooloolaba, Moore, Morven, Mt. Perry, Mulgeldie, Murgon, Nambour, Nanango, Nerang, Noosa, Palm Beach, Palmwoods, Peachester, Pialba, Pt. Vernon, Pomona, Proston, Quilpie, Redcliffe, Redbank, Redbank Plains, Redland Bay, Rosewood, Scarness, South Kolan, Southport, Strathpine, Tamborine, Tewantin, Theebine, Thornlands, Tiaro, Tingoor, Toogoolawah, Torquay, Tugun, Upper Caboolture, Urangan, Wallaville, Wamuran, Wellington Point, Wondai, Woodford, Woody Point, Woolooga, Wooroolin, and Yandina.

TOOWOOMBA SUB-OFFICE.

Inspections under the Health Acts and various Regulations were carried out in Toowoomba and at the following country towns:—Allora, Amiens, Applethorpe, Ballandean, Bell, Bowenville, Cabarlah, Cottonvale, Crow's Nest, Dalby, Dalveen, Drayton, Emu Vale, Freestone, Gladfield, Glen Aplin, Goondiwindi, Gowrie Junction, Hampton, Helidon, Highfields, Jandowae, Jimbour, Jondaryan, Kaimkillenbun, Karara, Killarney, Kingsthorpe, Kogan, Leyburn, Macalister, Maryvale, Meringandan, Oakey, Omana, Pechey, Pozieres, Roma, Sandy Creek, Stanthorpe, Tannymorel, Tara, The Summit, Thulimbah, Texas, Wallangarra, Warra, Warwick, Withecott, Wyreema, Yangan, and Yelarbon.

The number of miles travelled on these inspections outside Toowoomba was 3,000.

Food Premises Generally.—The general condition of food premises of all types throughout

the district was found to be good and compared favourably with previous years. No prosecutions were undertaken in respect of dirty premises and faults detected were usually of a minor nature capable of ready adjustment.

Hotels and Liquor Testing.—Inspections were made at hotels in Toowoomba and at all centres visited to ensure that the serving of liquor and preparation of meals were conducted in a hygienic manner.

As a result of notices issued many hotels in the major centres are now equipped with mechanical glasswashers supplied with hot and cold water. Some notices are still unfulfilled, and action will be taken in the coming year to ensure compliance. In several of the smaller centres glasswashing was found to be unsatisfactory, and action was taken to bring about the installation of improved facilities.

Working in conjunction with the Licensing Commission, orders were issued in several instances requiring alterations and additions to hotel kitchens and dining-rooms to bring them to a reasonable standard, and numerous recommendations were submitted concerning fly-proofing, repainting, and the provision of effective washing facilities or improved water supplies.

Liquor testing was carried out at all hotels visited, and at two premises adulterated spirits were encountered. Three charges were brought in respect of these breaches, and fines and costs of £13 1s. were imposed.

Milk.—The milk supply of the Toowoomba City area was subjected to constant supervision, and checks were made in the major country centres. A special visit was made to Roma, outside the district, for the purpose of securing samples of the town milk supply. In all, 130 official milk samples were procured and despatched for chemical analysis from the following sources:—Toowoomba, 86; Roma, 13; Warwick, 14; Goondiwindi, 7; Dalby, 6; Stanthorpe, 4.

Of this number, three samples contained added water; one contained a small amount, which could not be explained otherwise than as accidental; another was obtained from a Toowoomba retailer and subsequent checking of his wholesale supplier (third sample), a dairy farmer, traced the adulteration to this source. Legal proceedings were instituted against the latter and fine and costs totalling £12 12s. were imposed. A prosecution involving a Toowoomba vendor for selling milk below the prescribed standard of butter-fat is pending.

As a result of complaints of dirty milk supplied in Oakey arrangements were made with the Department of Agriculture and Stock for a survey of the milk sold by the one vendor in the town. Examinations revealed that, while the milk returned excellent methylene blue results, it contained much sediment. Appropriate action was taken by the Dairy Adviser at the farms where the supply is purchased and it is anticipated that considerable improvement will result.

The pasteurisation plant at Toowoomba continues to function efficiently. Some of the approved alterations were completed during the year, but delivery of the new bottlewasher is still awaited. A few instances of dirty milk bottles were encountered, and considerable trouble was experienced with dirty crates during

the year. Appropriate action was taken in all instances to secure improvement.

Another small plant in Toowoomba supplying processed milk to local vendors, cafes, &c., and to Brisbane was maintained in a satisfactory condition. Several matters, including a new filter, are listed for early attention.

Production of pasteurised milk at Warwick has not yet commenced. The actual building has been completed for over a year and the bulk of the equipment is on hand, but there is no indication of an early effective use of the franchise granted.

The small plant at Stanthorpe supplying bottled milk in the town area has been extended to incorporate a new cold room, and has been maintained, as usual, in an excellent condition.

Milk delivery vehicles were maintained at a reasonable standard throughout the district, but there is still room for improvement in a number of cases.

Bread.—Particular attention was given to bread production, and bakehouses were inspected regularly in Toowoomba and at all places visited. The standard of bakehouses generally was found to be good, and in only one instance was it necessary to order extensive repairs and alterations. Several old bakehouses in country towns have been modernised or rebuilt as a result of notices issued previously for improvement in conditions.

In Toowoomba, where the production and distribution of bread have been under attack from several organisations, a number of special surveys were conducted and weights of bread checked as a result of complaints. No instances of short-weight bread were encountered, and a range of bread samples submitted for examination disclosed that, on the whole, the bread produced was of fair average quality, well baked, and attractive in appearance. Distribution is not all that could be desired, in that bread is handled and packed hot—in many cases directly from the ovens into the vehicles—thus nullifying to a degree the reasonable quality of the loaves. Considerable improvement has been effected in the condition of the horse-drawn vehicles now in use and these now conform satisfactorily with requirements.

No outbreak of rope was reported in the district during the year.

Cafes and Milk Bars.—The standard of cafes and milk bars was maintained at a relatively high level. No prosecutions were found necessary, but some structural alterations, flyproofing, painting, and provision of more adequate dish and glass-washing facilities were ordered in a number of instances.

In Toowoomba, and also in some of the smaller towns, various cafes and milk bars have been modernised and provided with new kitchens embodying the latest in equipment, while others are to be similarly treated when labour and materials come to hand.

Supplies of crockery appear to be more readily procurable and the incidence of chipped and cracked utensils was low.

Grocery and Mixed Stores.—The usual attention was paid to these premises and suitable action taken to ensure that all foods were amply protected while awaiting sale. Several store-keepers were warned concerning untidy premises, and the necessary improvement was secured in each instance. The condition of foods on sale,

packed or otherwise, was very satisfactory, and the tendency to display unwrapped foods on counters without protection from flies and dust was less evident than in previous years.

Fish Shops.—Inspections of fish on sale in Toowoomba were carried out regularly. The number of premises engaged in fish distribution is small, and all have adequate storage facilities.

No unsound fish was encountered during the year, and only one complaint was received concerning fish quality. Investigation showed this fish to be stale, and the remainder of the stock, only a few pounds, was withdrawn from sale. This was an isolated instance occurring when fish was extremely scarce.

Action was taken to correct the misdescription of South African cod as “haddock,” and a firm bottling oysters was advised as to the correct information to be embodied in the labels.

Food Factories.—The few factories in the district engaged in processing food were well conducted. One small factory established for the manufacture of potato crisps was found to be generally unsuited for the purpose and, following representations, was removed to more suitable premises.

Aerated Water Factories.—These were inspected at Toowoomba and, where operating, at the places visited. Conditions generally were satisfactory, but in a few instances notices requiring more effective compliance with the regulations were issued. Chief defects were failure to provide effective filters or bottlewashing facilities, untidiness, and the misdescription of products. This latter fault has been very common, in the past, in small country towns where operatives depend for their labels on printers not conversant with the various standards for aerated waters, or who use stock labels prepared in Southern States. The task of correction is necessarily a slow one, since visits are not frequent, but much improvement has been made and small manufacturers are becoming increasingly aware of their responsibilities in this direction.

At one country factory several gallons of syrup prepared for manufacture were found to be infested with ants. As the occurrence was accidental and the factory otherwise in good order, no action was taken apart from witnessing its disposal.

Unsound Foods.—Unsound foods, comprising potatoes and tinned foods, of a total weight of 12 cwt. 18 lb. were certified as unfit for human consumption and destroyed by mutual consent.

Toowoomba Show.—Strict supervision was exercised over the production and sale of food-stuffs at the Toowoomba showgrounds during the staging of the Royal Agricultural Society's annual show. The usual intensive preliminary inspections prior to the opening proved of great value, and the degree of protection of foods was probably greater than on any previous occasion. However, considerable improvement could still be effected in the manner of glasswashing at liquor booths, and the provision of mechanical washers by the caterers at all major showgrounds, racecourses, &c., would appear to be the logical solution.

Poisons and Drugs.—The usual inspections were made at chemists, stores, and poisons dealers throughout the district and the necessary action taken to ensure that the provisions of the

Poisons Regulations, 1947, were being observed. Chemists generally were found to be carrying out their duties in accordance with requirements, and except for warnings in a few instances concerning improper or incomplete cancellation of prescriptions, no breaches were dealt with.

The storage of poisons and recording of sales at licensed poisons sellers' premises were generally satisfactory. In some parts of the district devoted to primary industry sales are considerable, both in numbers and quantity, and, although strict compliance with the Regulations is a difficult task, it was found that, in most cases, an effort was being made to keep accurate and complete records of distribution. Where necessary, instructions were issued for stricter compliance and a number of unlicensed vendors were required to obtain licenses.

Investigations concerning dangerous drugs were of a minor nature only and no improper practices were disclosed.

General.—No instance of the sale of lead toys was disclosed during the year, and periodical checks of fruit and vegetables on sale in Toowoomba did not reveal any contamination with arsenate of lead or other poisonous sprays.

The various Local Authority health inspectors are co-operating in the enforcement of the Food and Drug Regulations under the powers recently conferred upon them, and should do much to maintain the standard of food premises, particularly in those places which are not visited frequently from this sub-office.

During the first half of the year an assistant inspector from Headquarters was stationed at the sub-office, and the arrangement proved to be of great value.

SUMMARY OF PROSECUTIONS.

Date.	Place.	Charge.	Fines.	Costs.	Analyst's Fee.
1948—			£ s. d.	£ s. d.	£ s. d.
11th October ..	Toowoomba ..	Adulterated milk 8.1 per cent. ..	8 2 0	3 9 0	1 1 0
15th October ..	Helidon ..	Adulterated rum	2 0 0	0 6 0	1 1 0
15th October ..	Helidon ..	Adulterated rum	2 0 0	0 6 0	1 1 0
1949—					
12th April ..	Dalby ..	Adulterated whisky	5 0 0	0 6 0	1 1 0
		Totals	£17 2 0	£ 4 7 0	£ 4 4 0

Total fines and costs £25 13s.

ROCKHAMPTON SUB-OFFICE.

A lesser number of country centres was visited, due to demands in the city area and its environs. A total number of 7,081 miles were travelled by train and car in according official visits to country districts which, in so far as food and drugs were concerned, included the following places:—Ambrose, Anakie, Bajool, Biloela, Blackwater, Blair Athol, Bluff, Bogan-tungan, Bouldercombe, Calliope, Capella, Clermont, Comet, Cracow, Dingo, Duaringa, Emerald, Emu Park, Gladstone, Gogango, Grace-mere, Longreach, Kabra, Keppel Sands, Kemp Beach, Mount Larcom, Mount Morgan, Mulam-bin, Ogmore, Raglan, Rubyvale, Sapphire, Shoal Bay, Springsure, Stanwell, Theodore, The Caves, Westwood, and Yeppoon.

Notices served requiring food premises to be brought up to standard were as follows:—Under the hand of the Director-General, demanding reconstruction—Emerald, 1; Yeppoon, 3. By the inspector, for alterations and improvements—Anakie, 1; Calliope, 1; Emerald, 3; Gladstone, 9; Mount Morgan, 1; Rockhampton, 6; Rubyvale, 2; Springsure, 1; Yeppoon, 8.

In the past few years numerous improvements have been effected to food premises through the owners' or tenants' own initiative or as the result of enforcement of the regulations. Difficulties arising from shortages of materials were overcome by having owners or tenants place their orders with Rockhampton business firms, thereafter keeping an official check to ensure supplies being made available in proper turn. However, much work of extensive nature remains to be accomplished when circumstances permit.

Milk Supply.—One hundred and forty official samples of milk were secured and submitted to chemical analysis. This number represented an increase of over 60 per cent. on the previous year's figure. These were obtained from retail

deliveries or wholesale distributors at the following centres:—Rockhampton, 96; Emerald, 4; Emu Park, 2; Gladstone, 9; Mount Morgan, 6; and Yeppoon, 23—of which 14 were from cafes and other shops.

Legal proceedings were instituted in respect to seven samples adulterated with added water and one deficient in fat. Three of the former were withdrawn after an adulterated sample was secured from the wholesale supplier to the three vendors concerned. The other four were against wholesale suppliers. Conviction resulted in each case. Fines and costs imposed totalled £61 17s. The degree of adulteration ranged from 9.0 per cent. to 14.9 per cent. The milk concerned in the fat deficiency case showed a discrepancy of 33.3 per cent. as compared with the minimum standard of 3.3 per cent., while the average fat content of all other samples submitted at the same time average over 4.0 per cent. Several vendors were warned regarding fat deficiencies of a less serious nature.

Practically all milk delivery vehicles are fitted with regulation enclosed compartments for the cans of milk and utensils. The few exceptions are mostly confined to country towns. These are receiving attention. Constant supervision is necessary to ensure that vehicles are kept clean and in good repair, projecting milk taps covered, and only approved utensils used.

Pasteurised Milk.—The local milk pasteurising company continued to expand its trade. Preparation is being made to provide new premises equipped with the most modern plant. The existing pasteurising plant is unsuitably housed within the firm's butter factory. Two official and twelve unofficial samples of pasteurised milk were secured for testing. The former were submitted to the Department's laboratory in Brisbane and the latter to the Commonwealth Health Laboratory at Rockhampton. All were found to conform to standard.

The same company has developed a large local and country wholesale trade in processed milk, supplying cafes, shops, and retail deliveries. An increasing number of retail vendors relies on the company's product to augment their own supplies in times of drought.

Aerated Waters, Cordials.—Factories producing these commodities were given attention. Improvements to premises and equipment were made and faulty labelling corrected.

Bread.—In the city of Rockhampton bread distribution remained under the control of a central pool. All deliveries were by motor transport fitted with dustproof bodies. A few delivery men were warned regarding bread carried in open baskets, although exposure occurred only between one house and the next, and in no case was it necessary to warn the same person twice. Of two complaints by householders registered at the sub-office in respect to bread delivered, one was that the bread was a day old; in the other case the condition of the bread was evidently due to its having been packed in the van in hot condition direct from the oven. Two or three cases of bread contaminated by rope (*B. mesentericus*) came under notice. These infections were in a mild form and were quickly suppressed by remedial measures adopted at the respective bakehouses.

The pool system of handling gives the advantage of simplified supervision. Disadvantages include the loss of incentive competition as between bakers to produce the more appetising loaf. Also very few bakers now manufacture bread complying with the prescribed wholemeal standard.

A large new city bakehouse of modern construction recently built to replace an old one condemned by the sub-office will be in operation as soon as new ovens can be procured and placed in position.

Several bakehouses in the city and country towns were improved by repairs, alterations, or new equipment.

Fines and costs totalling £40 2s. were imposed on two bakers proceeded against in the courts in respect to bread found to be short of the due weight.

Cafes, Milk Bars, Restaurants.—In the city area several proprietors were required to improve premises or equipment. Although a good standard was maintained generally in the majority of these businesses a percentage calls for more constant supervision.

All such premises were inspected in country townships which could be accorded a visit during the year. Matters requiring attention were made the subject of verbal instructions or written notices.

Fish, Fish Shops.—The condition of fish offered for sale in retail shops was uniformly good and none requiring condemnation was encountered during the course of inspections. Cooked fish shops were inspected from time to time and some necessary repairs and additions to premises were effected.

Fruit and Vegetables.—No unsound fruit or vegetables on offer for sale came under notice and no complaints were received from the public in this connection. Distribution of seasonal supplies which sometimes glut metropolitan markets now seldom extends this far. Thus, although customers no longer have the occa-

sional opportunity of securing quantities cheaply, restricted consignments are a safeguard of sound quality. Apart from checking with regard to contamination by poisonous spray substances, the chief feature now relates to the displaying of these goods in a manner calculated to protect them from other means of contamination, such as by dust, and animals.

Grocers, Mixed Businesses.—A percentage of those in the city area was inspected and all of those in country towns visited. Necessary improvements to premises were enforced or are pending following the serving of notices in which time limits for compliance have not yet expired. Good progress is being achieved in securing reconstruction of or major alterations to older premises which have deteriorated or are otherwise hygienically unsound. Defects such as want of cleanliness, unsuitable equipment, exposure of food to contamination, stocks in unsound condition, unsatisfactory packing and improper labelling, &c., were dealt with where detected.

Hotels.—Automatic glasswashing apparatus is now installed in the city hotels having a major trade. The advantages of this aid are commended by the majority of users and discounted by the few. Food hygiene as regards kitchens and subsidiary rooms, dining-rooms, and equipment were dealt with in reports on some sixty odd hotels submitted for passing on to the Hotel Licensing Commission. Numerous recommendations for correction of unsatisfactory conditions were included. Adulteration of liquors on sale in hotel bars detected in the course of testing was followed by legal proceedings and convictions secured in all cases. Fines and costs totalling £86 2s. were imposed. In a case of false description a conviction was recorded with fine and costs totalling £11 7s.

Warehouses.—All warehouses in the city of Rockhampton were paid official visits. Besides checking the numerous lines stocked with regard to packing and labelling provisions, &c., special attention was given to the condition of food storage and packing rooms. "Spring cleaning" operations were adopted where required in compliance with instructions issued, and clearance of deteriorated stocks was effected.

Food Deliveries.—Food in course of delivery was subjected to supervision at every opportunity. Breaches detected, such as unsuitable vehicles, lack of proper cleanliness thereof, exposure to contamination, and improper handling, &c., were corrected.

Street Stalls.—Street stalls conducted from time to time by charitable organisations and other bodies were kept under notice to secure protection from contamination of cakes, sweets, and other commodities offered for sale. Co-operation was readily forthcoming and instructions given were carried out with promptitude.

Racecourse Booths, Show Grounds.—These were visited to ensure proper care being taken in the preparation and serving of food and the cleansing of crockery and drinking glasses, &c. Liquors tested in all instances conformed to the respective standards. Conditions relating to the sale of food including meals, drinks, confections and other foodstuffs at the Rockhampton showgrounds during the annual show of 1949 reached the best standard so far experienced. Constant supervision ensured speedy correction of faults which occurred during the busiest

times. The showgrounds society complied with requests made prior to the show in the matter of repairs and renovations to food stalls and booths. At the same time the society was informed of more extensive work of a permanent nature required to be undertaken before the next annual show.

Seaside Resorts.—Special attention was given to food hygiene at seaside resorts extending from Yeppoon through Emu Park to Keppel Sands. Notices were served demanding reconstruction of or alterations to premises which included cafes and other foodshops and a bakehouse. Some of the work entailed was completed and the remainder should be undertaken in the near future. Delivery vehicles were inspected and instances of exposure of food in transit corrected. Liquor on sale in hotel bars was tested. Samples of milk were secured from retail deliveries, wholesale suppliers, cafes, and other shops and submitted to analysis. Of fourteen samples obtained from cafes and shops three proved to be deficient in the prescribed fat content. Formerly such deficiencies were more general, due apparently to failure to stir the milk before serving, so that early customers received most of the cream and later ones were supplied with milk which was below standard. Official warnings issued in the meantime thus appear to have been effective in most cases.

Paints.—Packages of paint handled for sale by wholesale and retail stores were checked regarding labelling provisions which require ingredients, percentage of same, and other details to be declared. These provisions were found to be more generally observed than in the past. Two samples of paint in powdering condition removed from the same premises—one from veranda railings and steps and the other from fence and gates—were found to contain 46.0 per cent. and 33.0 per cent. of soluble lead respectively. The owner of the house was instructed to have the paint removed. One sample of paint being applied to a house fence was secured and found to conform to standard. In view of the number of premises new and old being painted it is to be regretted that staff was not available for adequate sampling to ascertain the nature of paints applied to external surfaces within the reach of children.

Poisons, Drugs.—Breaches detected when checking on the sale of poisons by wholesale and

retail licensed dealers and chemists in regard to methods of packing, labelling, and keeping of records were not of a serious nature. These were corrected under instructions. A number of storekeepers not holding licenses were found to have in possession for sale prohibited lines of poisons, such as arsenical or phosphorous preparations intended for destruction of ants or vermin. These breaches appeared to be due to ignorance of the law on the part of the shopkeepers and stocks on hand were returned to wholesale suppliers forthwith. In policing provisions of the Regulations relating to dangerous drugs chemists' shops were visited and stocks, prescriptions, and records examined. Medical practitioners were interviewed concerning prescriptions written otherwise than in the manner prescribed. A special investigation into the procuring and use of dangerous drugs, by a practising dentist resulted in the launching of a prosecution in respect thereto. A conviction was recorded and fines and costs amounting to £5 6s. were imposed. Legal proceedings taken against a chemist on two charges relating to a dangerous drug prescription dispensed by him brought convictions, with penalties and costs totalling £2 12s.

TABLE XXXI.
UNSOUND FOOD DESTROYED FOR THE YEAR
ENDED 30TH JUNE, 1949.

	C.	Q.	L.	O.
Baking powder	0	0	1	0
Breakfast foods	0	2	23	0
Canned fish	0	0	10	0
Canned meats	1	0	14	12
Canned milk	0	0	22	0
Canned soups	0	3	23	15
Canned vegetables	4	1	26	0
Cheese	0	0	0	8
Confectionery	0	0	12	0
Cornflour	0	1	12	0
Custard powders	0	2	25	4
Dried fruits	0	0	4	12
Flour	0	0	2	0
Jams and preserves	1	2	11	4
Mayonaise	0	0	0	12
Mustard	0	0	1	10
Pickles	0	0	4	8
Pudding and scone mixtures	0	1	22	12
Soup powders	0	0	7	12
Spice	0	0	0	2
Vermicelli	0	0	1	0
Total	11	0	2	15

In addition 972 headache powders were destroyed.

TABLE XXXII.
PROSECUTIONS UNDER "THE HEALTH ACTS, 1937 TO 1948."

Date.	Place.	Nature of Offence.	Fines.	Costs.
1948—			£ s. d.	£ s. d.
13th July	Theodore ..	Bread, short weight	14 10 0	0 6 0
15th July	Cracow ..	Rum, adulterated	5 0 0	1 7 0
22nd July	Longreach ..	Rum, adulterated	5 0 0	1 7 0
22nd July	Longreach ..	Rum, falsely described	10 0 0	1 7 0
22nd July	Longreach ..	Bread, short weight	25 0 0	0 6 0
1st October	Rockhampton	Dangerous drugs, records not kept	5 0 0	0 6 0
26th November	Rockhampton	Milk, adulterated	15 0 0	1 7 0
1949—				
11th January	Yeppoon ..	Milk, adulterated	12 0 0	1 7 0
11th January	Yeppoon ..	Milk, adulterated	9 0 0	1 7 0
14th January	Gladstone ..	Dangerous drug, prescription not cancelled	1 0 0	0 6 0
14th January	Gladstone ..	Dangerous drug, prescription not endorsed	1 0 0	0 6 0
14th February	Rockhampton	Milk, adulterated	13 0 0	3 9 0
15th June	Rockhampton	Whisky, adulterated	13 0 0	1 7 0
15th June	Rockhampton	Whisky, adulterated	20 0 0	1 7 0
15th June	Rockhampton	Whisky, adulterated	18 0 0	1 7 0
15th June	Rockhampton	Gin, adulterated	14 0 0	1 7 0
29th June	Rockhampton	Milk, fat deficiency	4 0 0	1 7 0
Totals			£184 10 0	£19 16 0

TOWNSVILLE SUB-OFFICE.
SUMMARY OF INSPECTIONS.

Area.	First In- spections.	Re-in- spections.	Official Calls.	Towns Visited.
City	773	71	271	17
Country	321	42	85	..
	1,094	113	356	..
Grand Total ..	1,563			
Miles travelled—4,713.				

The above inspections included all classes of premises wherein foods and drugs were being manufactured, stored, or handled for sale.

Bakehouses.—Periodical inspections have been made during the year and general conditions were mostly satisfactory. One newly-constructed bakery with all modern equipment replaced a building which was not up to the required standard. In other instances the majority of the buildings are maintained in good repair, whilst the interiors are kept in a clean condition.

Hotels.—Supervision has been exercised over the sale of spirituous liquors, both in relation to quality and other methods adopted in respect to general cleanliness and service. Many hotels have already installed approved automatic hot-water glasswashers in the bars, and as supplies of these machines come forward more are being installed. Several hotel owners, anxious to improve the general condition of their premises, and who have been successful in obtaining the necessary materials, have carried out renovations to bars and other portions of the premises without requests or orders by the Department.

Adulterated Cordials.—Legal action was taken against one cordial manufacturer in respect to four separate samples—namely, pineapple, passion-fruit, raspberry, and strawberry. Upon analysis the Government Analyst found that the fruit juice content was nil, and the cordial although actually only “imitation” and “artificially coloured” was not labelled accordingly.

In each instance the two defendants, trading as the company, pleaded guilty and were convicted and fined 10s. each on each of the four complaints and ordered to pay £4 4s. analyst fees and £1 16s. costs of court.

Unsound Foods.—As a result of frequent visits to warehouses, general stores, &c., the following foods and drugs were withdrawn from sale and destroyed on account of being unfit for human consumption:—169 lb. matured cheese, 10,460 lb. prawns (cooked), 160 lb. tripe (cooked), 10½ lb. tea.

Drugs.—A quantity of drugs were withdrawn from public auction sales during the year, as the articles were not permitted to be so sold under the poisons law or were in a deteriorated condition or were otherwise unfit for human consumption.

Milks.—Of fourteen official samples of milk obtained from local vendors and submitted to the Government Analyst for analysis, eleven were found to comply with the required standard for milk whilst two were found to be deficient in total solids and fat, and one deficient in solids not fat. Analyst's reports on the Townsville milk supply continue to be satisfactory and the vendors are usually co-operative in respect to general cleanliness and other requirements of the regulations.

Cafes.—Periodical inspections have also been carried out of cafes, milk bars, &c., and attention given to the method of dealing with food-stuffs handled in such premises. It has been noticed that as a result of a slight improvement in the arrival on the market of materials, utensils, crockery, &c., there is a tendency on the part of some proprietors to carry out renovations to their premises.

COUNTRY.

Towns within the area of this sub-office visited during the year included Ayr, Bemerside, Charters Towers, Cloncurry, Halifax, Home Hill, Hughenden, Ingham, Julia Creek, Macrossan, Major's Creek, Mount Isa, Paluma, Prairie, Richmond, Torrens Creek, and Trebonne.

Visits to these towns were in most instances for the purpose of general inspections, when attention was given to all matters and to all classes of business which come within the scope of The Health Acts and Regulations made thereunder.

Charters Towers.

Eleven official milk samples were obtained and submitted to the Government Analyst, who found upon analysis that three were adulterated with added water to the extent of 16 per cent., 10.6 per cent., and 6 per cent. respectively, the two former samples being from the one vendor. Legal action was taken against both offenders for having sold milk which was adulterated. In the first case the defendant pleaded not guilty and after hearing evidence the magistrate convicted him and imposed a fine of £16 with £2 2s. professional costs, £1 1s. analyst's fee, and 6s. costs of court. A further case was taken against the same defendant for having sold milk without a milk license, when a plea of guilty was entered and a fine of £1 with £2 2s. professional fees and 6s. costs imposed by the magistrate.

Regarding the second defendant the case was heard *ex parte* and the magistrate convicted him and imposed a fine of £6 with £2 2s. professional fee, £1 1s. analyst's fee, and 6s. costs of court.

Mount Isa.—As a result of representations made to have a check on the possible lead content in milk, four samples of milk were obtained from the local dairy and submitted to the Government Analyst for examination. Each of the samples of milk drawn direct from three cows were found to be lead free. The fourth sample drawn from the bulk supply revealed an insignificant amount (.08 per cent.), which the Analyst considered could have been attributed to the possibility of lead solder in the seam of the can from which the sample was drawn.

Each of three samples of water drawn from the Leichhardt River along which the cows pastured revealed the negligible trace of .01 per cent. lead.

CAIRNS SUB-OFFICE.

The work of this sub-office during the year has embraced every avenue of food manufacture, transport, and sale, and has necessitated visits of inspections to food-manufacturing premises, food transports, and premises handling food for sale to the public.

Milk naturally takes pride of place in any food control and it is pleasing to report that the milk supply in far North Queensland can be considered very reasonable. Every avenue of milk production and distribution has been fairly well policed and the absence of any serious trouble is gratifying. During the year 33 official samples of milk were submitted for analysis from the area and the results were generally satisfactory. Faults that became apparent during the year were immediately rectified on the offender being advised. The presence of milk-processing plants in the area and continued supervision has definitely caused a great improvement in the standard of milk sold in this area.

Bread is another food that received attention, both at Cairns and in the country. Factories were continually inspected and kept up to a fair standard, whilst analyses of bread showed that the quality, if not outstanding, was reasonable. Delivery of bread and the wrapping of bread for sale are matters always controversial but, in spite of material shortages, an improvement has been maintained. Further improvement is desirable and it is hoped will be effected shortly.

Testing of alcoholic liquors and the inspection of conditions under which they are dispensed were carried out. No serious defects were found in the quality of liquors sold and a decided improvement in selling conditions was effected by the installation of automatic hot-water glasswashing machines for glasswashing. It is to be regretted that delay in their installation was occasioned by power rationing, but now that rationing has been lifted it is expected that the few delinquents will readily fall into line.

Every other avenue of food production, transport, and handling came under review and it was generally found that reasonable efforts were being made to conform with the law.

The quality of goods sold was continually kept under observation and check samples were at times submitted for analysis. These included breads, aerated waters, milks, fish, &c., and totalled twenty for the year.

As a result of these latter inspections, a total of 2 tons 16 cwt. 3 qr. 9 lb. of foodstuffs were destroyed during the year, in addition to 100 dozen oysters and 4½ bushels of tomatoes. Approximately 1½ tons of this total is accounted

for by foodstuffs damaged by cyclone in Cooktown.

The inspections for the above work necessitated the travelling of 8,663 miles by train, road, and boat and caused visits to the following towns:—Almaden, Atherton, Babinda, Babinda Creek, Bingil Bay, Brampstons Beach, Cardwell, Clifton Beach, Cooktown, Currajah, Dunk Island, Edmonton, Einasleigh, El Arish, Ellis Beach, Etty Bay, Euramo, Feluga, Flying Fish Point, Forsayth, Freshwater, Garradunga, Georgetown, Gordonvale, Halfmoon Bay, Herberton, Holloways Bay, Innisfail, Innot Hot Springs, Kamerunga, Kuranda, Kurramine, Lower Tully, Machans Beach, Malanda, Mena Creek, Meringa, Millaa Millaa, Moresby, Mossman, Mourilyan, Mount Garnet, Mount Molloy, Mount Surprise, North Mission Beach, Palm Beach, Peeramon, Port Douglas, Ravenshoe, Redlynch, San Remo, Silkwood, Smithfield, South Mission Beach, South Johnstone, Stratford, Trinity Beach, Tully, Wangan, Woree, Yorkies Knob, and Yungaburra.

Drugs Inspection.—As much time as possible was afforded this important branch of the departmental activities. The necessary inspections require discussions with medical practitioners, chemists, veterinary surgeons, hospitals, and licensed dealers in poisons, whilst a close check has to be kept on all illicit sales of poisons.

Measures for the effective policing of the Poisons Regulations have been taken, whilst a close check has been kept to prevent unlicensed dealers handling poisons. Where people have been found offending in the latter direction the necessary corrective action has been taken.

MACKAY SUB-OFFICE.

During the year inspections were carried out at bakehouses, cafes, cordial factories, grocery stores, hotels, warehouses, &c., within the city of Mackay, and at Bowen, Bucasi, Carmila, Calen, Collinsville, Eton, Eimeo, Glenella, Koumala, Kuttapul, Merinda, Mirani, Mount Jukes, Mount Ossa, Proserpine, Rosella, Sarina, Seaforth, Slade Point, St. Lawrence, The Leap, Walkerston, and Wandaru.

Milk.—Twenty samples of milk were obtained for analysis at Mackay, Proserpine, and Bowen, and prosecutions undertaken for the sale of adulterated milk, particulars of which are given in the following table:—

MILK PROSECUTIONS.

Date.	Place.	Basis of Prosecution.	Fines.	Costs.
1948—			£ s. d.	£ s. d.
16th December ..	Bowen	Adulterated with 23·7 per cent. added water	20 0 0	1 7 0
16th December ..	Bowen	Adulterated with 22 per cent. added water ..	20 0 0	1 7 0
17th December ..	Proserpine ..	Adulterated with 6 per cent. added water ..	6 0 0	1 7 0
17th December ..	Proserpine ..	Adulterated with 5 per cent. added water ..	5 0 0	1 7 0
Total			£51 0 0	£ 5 8 0

Spirituuous Liquors.—The alcoholic strength of liquors sold in hotel bars was tested and found to be satisfactory. Notices were served on hotel-keepers requiring the provision of automatic glasswashing machines.

General Inspections.—Inspection of all types of premises used in the sale of food were carried

out, and where minor breaches of the Regulations were found suitable action was taken.

Poisons.—Inspections under the Poisons Regulations were made of chemists' shops, warehouses, and stores, and it was found that the spirit of the law was being satisfactorily complied with.

Unsound Foods.—As a result of inspections during the year the following detailed list of foodstuffs was found to be unsound. These articles were destroyed under the supervision of our officer:—

UNSOUND FOODS DESTROYED, MACKAY SUB-OFFICE.

Article.	Quantity.			
	T.	C.	Q.	L.
Condiments	0	0	0	20
Confectionery	0	13	0	8
Fish, canned	0	0	0	22
Fruit, canned	0	0	3	8
Honey	0	0	4	9
Invalid Foods	0	0	0	2
Jams	0	0	4	25
Kippers, smoked	0	0	0	14
Meat, canned	0	0	6	7
Peas, green	0	0	1	19
Potatoes	0	6	3	21
Pumpkins	0	4	2	14
Vegetables, canned	0	4	3	7
	<hr/>			
	1	15	0	8
Fresh fruit (cherries)	5			trays
Pumpkins	45			bags

THURSDAY ISLAND SUB-OFFICE.

Regular inspections and reinspections under the Health Acts, the Food and Drug Regulations, and the Poisons Regulations were carried out during the year.

Food premises were found to comply generally with the required standards.

Spirits offered for sale at the four hotels were tested during the year and found to conform to the legal standard in every instance.

Alterations were carried out in one aerated water factory to bring it up to the standard required by the Regulations. The second is awaiting building materials to carry out minor repairs.

SANITATION SECTION.

LOCAL AUTHORITY ADMINISTRATION.

Advisory and supervisory control of Local Authority administration of the Health Acts and Regulations thereunder were maintained during the year by tours of inspection and sanitary surveys throughout the State by Departmental officers and also by the examination of quarterly and annual reports submitted by Local Authorities.

The reports indicate that, generally, councils are endeavouring to carry out improved health programmes and are striving to establish a higher standard of sanitation in their respective areas. However, there are a number of councils who are slow to appreciate the beneficial results of an active and progressive administration and who do not realise the ill-effects caused not only in their own area but in adjacent areas as well and the State as a whole.

The absence of notifiable infectious diseases is not an assurance that the sanitary environment of an area is of a high standard, nor is it a sound reason for the lack of improvement or for the non-existence of plans and preparations for present and future advancement.

The freedom from notifiable infectious disease may only be transient and is not a reliable index or a sound reason to presume that all is well.

The ramifications of public health work include every measure which has the definite purpose of improving the living conditions of the people and are not limited to the temporary measures usually adopted to combat an outbreak of infectious disease. A wider outlook, together with planned progressive programmes, are essential for effective administration. Health work, which is a positive and not a perfunctory activity, is often relegated to a third or fourth place in Local Authority budgets by the appointment of one inspector to a joint area of three or four councils, hence the most important department—the field work—is neglected, and the merit of the personal instruction and advice and of regular and systematic inspections and reinspections is not fully realised. Joint areas are too scattered for effective control and consequently too little time is spent in each area.

Several northern and western Local Authorities have been under the disadvantage of being unable to obtain the services of a health inspector. Recently, however, the position was partly relieved by the appointment of newly-qualified men, the majority of whom were trainee inspectors (Post War Reconstruction) who had served a period of two years' practical training with Local Authorities.

The war and postwar handicaps of labour and material shortages, together with increased costs and higher contract prices, have retarded development of the essential sanitary services into first-class organisations. These scarcities should not be used as an excuse for indifference and neglect or for not utilising all available material and labour to the best advantage.

Nightsoil depots throughout the State showed improvement, but much higher standards in management and conduct are required before any depots can be regarded as first-class.

The collection and disposal of nightsoil (sewage) by burial in the earth is just as important as the water-carriage system and both systems require first-class technique and organisation for successful working.

The value of refuse disposal at "controlled tips" has not been fully recognised by many councils. By the adoption of this system valueless lands can be reclaimed and converted into council assets. The Brisbane City Council and a number of other councils have done excellent reclamation work and from swampy, low-lying, useless land recreation grounds and public reserves have been created in a most economic manner.

The collection of refuse is carried out in a haphazard, unorganised manner by many councils. The absence of standard refuse bins on premises, irregular removals, and uncovered and improperly-constructed vehicles call for a much-needed reform.

Mosquito control has become a major operation in many areas, especially in the coastal districts. The Government's 50 per cent. mosquito eradication subsidy has been responsible for councils carrying out extensive drainage works.

The eradication of the domestic types (*A. aegypti* and *C. fatigans*) has not been given the attention which their importance deserves. Control work entails regular and systematic

inspections and reinspections. A few councils employ staff for this purpose and receive 50 per cent. subsidy on the expenditure entailed. Many councils could follow this example with advantage and so enforce a stricter compliance with the Mosquito Regulations.

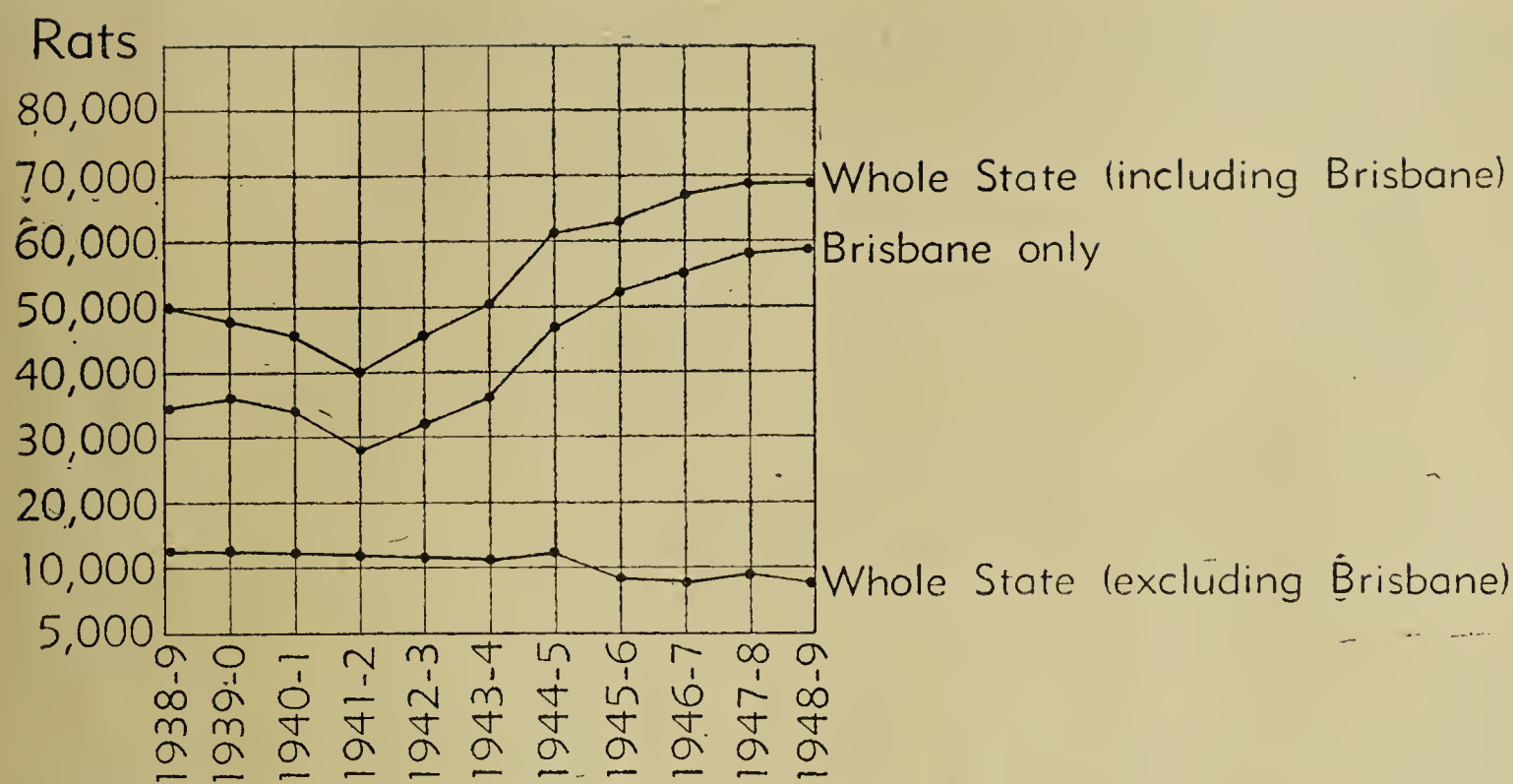
Reference to the list of Local Authorities who have obtained the 50 per cent. subsidy from February, 1943, to 30th June, 1949, will give an indication of the extent of the mosquito eradication work being carried out in the State:—

TABLE XXXIII.

Local Authority.	Subsidies.						Total Subsidies, 1943-1949.
	1943-1948.			1948-1949.			
	£	s.	d.	£	s.	d.	
Brisbane	200,694	10	0	82,548	14	1	283,243 4 1
Cairns .. .. .	..	..	..	7,586	0	0	7,586 0 0
Townsville	12,751	10	0	8,063	4	0	20,814 14 0
Rockhampton	11,384	0	0	728	0	0	12,112 0 0
Ipswich	17,425	0	0	..	..	..	17,425 0 0
Gympie	540	4	10	..	..	..	540 4 10
Maryborough	10,778	6	6	..	..	..	10,778 6 6
Bundaberg	4,366	5	0	400	0	0	4,766 5 0
Charters Towers	312	0	0	..	..	..	312 0 0
Warwick	2,600	0	0	239	0	0	2,839 0 0
Mackay	5,925	0	0	..	..	..	5,925 0 0
Redcliffe	4,194	14	8	8,014	17	6	12,209 12 2
Charleville	2,178	0	0	178	0	0	2,356 0 0
Roma	992	0	0	..	..	..	992 0 0
Dalby	2,394	0	0	200	0	0	2,594 0 0
Coolangatta	5,000	0	0	1,000	0	0	6,000 0 0
Gladstone	5,515	0	0	..	..	..	5,515 0 0
Goondiwindi	13,570	0	0	..	..	..	13,570 0 0
Bowen	1,250	0	0	1,540	0	0	2,790 0 0
Toowoomba	5,030	0	0	..	..	..	5,030 0 0
Southport	12,140	0	0	7,911	0	0	20,051 0 0
Aramac Shire	27	0	0	..	..	..	27 0 0
Barcaldine Shire	385	0	0	50	0	0	435 0 0
Beaudesert Shire	2,500	0	0	..	..	..	2,500 0 0
Blackall Shire	230	0	0	627	0	0	857 0 0
Burrum Shire	1,680	0	0	75	0	0	1,755 0 0
Boonah Shire	1,087	15	0	1,058	0	0	2,145 15 0
Cardwell Shire	500	0	0	200	0	0	700 0 0
Chinchilla Shire	500	0	0	500	0	0	1,000 0 0
Caboolture Shire	1,068	0	0	..	..	..	1,068 0 0
Cloncurry Shire .. .. .	..	..	..	2,000	0	0	2,000 0 0
Esk Shire	153	0	0	..	..	..	153 0 0
Emerald Shire	150	0	0	..	..	..	150 0 0
Herberton Shire	265	0	0	328	0	0	593 0 0
Hinchinbrook Shire	4,138	0	0	..	..	..	4,138 0 0
Inglewood Shire .. .. .	..	..	..	1,748	10	0	1,748 10 0
Isis Shire	2,600	0	0	..	..	..	2,600 0 0
Johnstone Shire .. .. .	..	..	..	628	9	2	628 9 2
Jondaryan Shire	11	10	0	..	..	..	11 10 0
Kingaroy Shire	323	0	0	..	..	..	323 0 0
Livingstone Shire	4,553	0	0	..	..	..	4,553 0 0
Longreach Shire	593	5	0	152	0	0	745 5 0
Mirani Shire	918	15	0	..	..	..	918 15 0
Monto Shire	111	4	0	..	..	..	111 4 0
Mundubbera Shire	357	0	0	..	..	..	357 0 0
Mulgrave Shire	6,000	0	0	8,630	0	0	14,630 0 0
Murgon Shire .. .. .	..	..	..	500	0	0	500 0 0
Nerang Shire	250	0	0	1,742	10	0	1,992 10 0
Pioneer Shire	1,831	0	0	1,063	0	0	2,894 0 0
Paroo Shire	1,500	0	0	2,500	0	0	4,000 0 0
Proserpine Shire	1,925	0	0	..	..	..	1,925 0 0
Rosewood Shire	2,500	0	0	105	0	0	2,605 0 0
Sarina Shire	960	0	0	800	0	0	1,760 0 0
Tara Shire .. .. .	..	..	..	24	0	0	24 0 0
Tingalpa Shire	125	0	0	500	0	0	625 0 0
Widgee Shire	1,211	0	0	150	0	0	1,361 0 0
Woongarra Shire .. .. .	..	..	..	750	0	0	750 0 0
Woothakata Shire	107	16	5	..	..	..	107 16 5
Total Subsidies Approved £	357,601	16	5	142,540	4	9	500,142 1 2

Rat infestation is a problem which should be seriously reviewed by councils who control the larger centres of population. Comparison of the annual rat-destruction figures for a period of eleven years shows that the position has been

practically static except in the metropolitan area, where increases are reported. The graph on page 31 gives a good indication of the position.



Rats Destroyed: 11 Year Period

The graph shows that no improvement has taken place in the control of the rat population outside the Brisbane area. No addition to staffs or any change in methods, systems, or organisation can be reported, and it would appear that most councils are content to carry on with the same old routine which has been practised for so many years without change and without

thought of the increasing population or the rapid development in housing and industry. Until councils plan for practical destruction operations, and insist on a stricter application of the Plague Regulations, the advantage will remain with the rat.
The prevention and destruction work done during the year is tabulated hereunder:—

TABLE XXXIV.
RAT RETURN, 1948-49.

Local Authority.	July.	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	Totals.
Brisbane	4,838	4,656	5,145	5,544	5,652	4,027	4,987	4,295	4,370	5,505	5,985	4,824	59,828
Bundaberg	73	44	52	67	65	56	43	54	61	44	129	29	717
Cairns	132	97	97	125	94	116	106	141	131	149	147	152	1,487
Gympie	15	8	6	3	3	8	..	10	1	2	5	12	73
Ipswich	38	60	45	40	77	48	108	50	26	99	212	62	865
Mackay	70	114	87	76	128	140	96	..	..	..	..	108	819
Maryborough ..	77	19	111	97	88	41	46	85	105	46	73	79	867
Rockhampton ..	289	274	320	277	246	205	138	137	161	185	181	148	2,561
Townsville .. .	22	45	21	30	100	66	90	48	390	264	268	263	1,607
Totals	5,554	5,317	5,884	6,259	6,453	4,707	5,614	4,820	5,245	6,294	7,000	5,677	68,824

MOUSE RETURN, 1948-49.

Local Authority.	July.	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	Totals.
Brisbane	545	409	488	630	545	412	476	428	468	534	671	584	6,190
Bundaberg .. ..	..	..	..	..	..	..	..	..	..	..	..	..	..
Cairns	21	20	22	25	20	15	15	21	21	25	32	21	258
Gympie .. .. .	..	..	..	..	..	..	..	..	..	..	..	..	..
Ipswich	30	..	..	..	44	14	21	..	..	..	10	..	119
Mackay	218	213	119	77	80	83	130	..	..	..	..	90	1,010
Maryborough ..	43	..	..	..	..	..	..	..	..	..	..	..	43
Rockhampton ..	..	..	..	..	..	..	..	..	..	..	..	..	..
Townsville .. .	..	..	..	..	..	..	..	..	..	..	..	..	..
Totals	857	642	629	732	689	524	642	449	489	559	713	695	7,620

Rat smears submitted by Local Authorities were :—

Extra-metropolitan—				
Bundaberg	..	..	..	706
Gympie..	..	..	..	69
Ipswich..	..	..	..	539
Mackay..	..	..	..	1,110
Maryborough	..	..	..	415
Metropolitan—				
Sandgate	..	..	..	736
Wynnum	..	..	..	662
Meatworks	..	..	..	305
Total	..	..	..	4,542

The number of rats examined at the Commonwealth laboratories were :—

Cairns	..	..	..	1,586
Townsville Council	..	..	..	1,269
Townsville Harbour Board	..	..	..	440
Rockhampton	..	..	..	2,580
Total	..	..	..	5,875

The demand for public retiring accommodation has engaged the attention of a number of Local Authorities, and all applications for loans and subsidies were recommended for approval :—

TABLE XXXV.

Local Authority.					Loan.	Subsidy.	Works.
					£	£	
Biggenden	..	..	..	..	413	87	Public accommodation
Burrum	..	..	..	..	2,000	1,000	Public and camp accommodation
Coolangatta	..	..	..	..	6,500	2,166	Public and camp accommodation
Cleveland	..	..	..	..	1,200	300	Public and camp accommodation
Ipswich	..	..	..	..	2,625	875	Public accommodation
Inglewood	..	..	..	..	850	150	Public accommodation
Johnstone	..	..	..	..	6,750	2,250	Public and camp accommodation
Kilkivan	..	..	..	..	454	96	Public accommodation
Landsborough	..	..	..	..	1,000	333	Public and camp accommodation
Millmerran	..	..	..	..	80	20	Public accommodation
Nerang	..	..	..	..	5,000	1,666	Public and camp accommodation
Stanthorpe	..	..	..	..	1,403	297	Public accommodation
Tamborine	..	..	..	..	1,000	333	Public accommodation
Toowoomba	..	..	..	..	2,500	833	Public accommodation
Woongarra	..	..	..	..	1,650	350	Public and camp accommodation
Total..	..	..	..	..	£33,425	£10,756	

Schemes which have a direct bearing on public health—such as water supply, sewerage, drainage, and street water-channelling—are making progress in many cities and towns. These engineering works come under the control of the Department of Local Government’s technical staff.

At seaside resorts a general allround improvement in the condition of camping and picnic areas during the Christmas and New Year holiday season was reported by departmental officers. Renovation of existing accommodation was carried out, and additional conveniences were provided where necessary prior to the opening of the season.

Modern accommodation is being planned by the majority of the seaboard Local Authorities, and a forward move is being made to cater for campers and tourists.

DEPARTMENTAL SUPERVISION.

The table hereunder gives an analysis of inspections carried out by departmental officers from Headquarters office :—

Area.	First Inspections.	Re-Inspections.	Official Calls.
Metropolitan	3,563	239	505
Country	3,589	..	156
Totals	7,152	239	661
Grand Total	..	8,052	

The first inspections within the Metropolitan area included :—Barbers’ shops 202, common lanes and yards 203, drainage and sewerage 453, Government premises 41, mosquitoes 47, pig-

geries 12, theatres 70, rat infestation 84, sanitary accommodation (public) 163, swimming pools and accommodation 182, refuse tips 148, refuse tips (new sites) 140, sanitary depots 167, sanitary depots (new sites) 4, stables 9, bedding and upholstery 78, housing camps 198, mosquito subsidy 101, Royal National Show 441, hotels 256, holiday camps 144, miscellaneous 361.

In the country areas sanitary surveys and inspections were carried out at :—Amamoor, Appletree Creek, Alexandra Headlands, Beaudesert, Bundaberg, Biggenden, Binjour, Burpengary, Beachmere, Beenleigh (3), Burnett Heads, Booyal, Bargara, Bingera, Bauple, Burleigh Heads, Bilinga, Cleveland, Caboolture, Childers, Cordalba, Coolangatta (4), Currumbin (3), Charleville, Cunnamulla, Coomera, Caloundra (3), Coominya, Crawford, Deception Bay, Esk, Eidsvold, Elliott Heads, Forest Hill, Fernvale, Gayndah, Gooroolba, Gin Gin, Gatton, Grantham, Gunalda, Gundiah, Goomeri, Golden Beach, Harlin, Ipswich (3), Innes Park, Kilkivan, Kingaroy, Landsborough, Lowood, Lawnton, Logan Park, Moreton, Maryborough (3), Monto, Mulgildie, Miriam Vale, Mooloolabah (3), Maroochydore (3), Mount Perry, Mitchell, Morven, Moore, Murgon, Munna Point, Nambour (3), Neilsen Park, Nerang (3), Nanango, Noosa (3), Pialba, Palm Beach, Proston, Quilpie, Redcliffe (9), Redbank, Redland Bay, Riverview, Southport (5), Strathpine (2), South Kolan, Scarness, Thornside, Tugun (2), Tiaro, Theebine, Tewantin (2), Tingoora, Toogoolawah, Urangan, Victoria Point, Wellington Point, Wallaville, Wondai, Wooroolin, and Woolooga.

Departmental officers were placed on fulltime duty each day during the period of the Royal National Show in Brisbane to supervise the sanitation of the grounds and accommodation.

Recommendations for future improvements were submitted to the association for consideration; 441 inspections were made.

A survey of 48 city and suburban theatres

was carried out and the following table is a summary of the information obtained. All defects and insanitary conditions were reported to the council for attention.

TABLE XXXVI.

Sanitary Accommodation.						Ventilation.			Rodent Control.	Vermin Control.									
W.Cs.		E.Cs.		Urinals.							Treatment with				Periods of Treatment.				
Satisfactory.	Not Satisfactory.	Satisfactory.	Not Satisfactory.	Satisfactory.	Not Satisfactory.						Insecticide D.D.T. Base	Disinfectant Phenol Base.	Miscellaneous Insecticides.	Nil.	Daily.	Tri-weekly.	Bi-weekly.	Weekly.	Nil.
37	1	9	1	46	2	8	10	30	48	..	28	8	12	..	6	7	9	26	..

During the swimming season regular tests of swimming-pool water with chlorotex reagent were carried out for residual chlorine. Where the residual chlorine was found below 0.2 p.p.m. samples were obtained and submitted for bacteriological examination. The results of these tests as tabulated hereunder show that the quality of the water was maintained at a high standard.

Inspections of the sanitary conditions of the accommodation and dressing sheds were made at each visit; 182 inspections were made.

Immediate action was taken for correction where the results were found unsatisfactory.

TABLE XXXVII.
MUNICIPAL POOLS.

Swimming Pool.		Chemical.		Bacteriological.	
		No. of Tests.	No. Satisfactory.	No. of Tests.	No. Satisfactory.
Booroodabin ..	..	4	4	..	..
Davis Park ..	..	6	6	..	..
Ithaca ..	..	4	4	..	..
Spring Hill ..	..	7	5	2	2
Toowong ..	..	6	6	..	..
Lake Emerson* ..	..	..	..	6	6
Ipswich ..	..	2	1	..	..

* Diving pool, Morningside.

STATE SCHOOLS (METROPOLITAN).

Swimming Pool.	Chemical.		Bacteriological.	
	No. of Tests.	No. Satisfactory.	No. of Tests.	No. Satisfactory.
Ascot ..	5	4	1	1
Buranda ..	6	5	2	2
Blind, Deaf and Dumb ..	2	1	1	..
Cannon Hill ..	7	7	..	..
Coorparoo ..	6	6	..	..
Green Lanes† ..	11	10	1	1
Greenslopes ..	5	5	..	..
Junction Park ..	4	3	1	1
Milton ..	5	4	..	..
Wilston ..	7	7	..	..
Windsor ..	4	4	..	..
Wooloowin ..	6	6	..	..
Silkstone ..	2	2	..	..

SECONDARY SCHOOLS.

5 Schools	10	2	13	10
--------------	----	----	---	----	----

† Private pool used by State Schools.

Inspections (78) of premises, and sampling (64) of filling materials under “The Bedding and Upholstery Regulations, 1948,” were made and obtained during the year.

The following table is a summary of the Government Analyst’s findings on the various filling materials:—

TABLE XXXVIII.

Material.	Number of Samples.	Chlorine Standard 150 Parts—100,000.		Ammonia Standard 6 Parts—100,000.		Turbidity Standard 30 Parts—100,000.	
		Passed.	Failed.	Passed.	Failed.	Passed.	Failed.
Australian—							
Flock	24	23	1	23	1	18	6
Wool/cotton flock ..	5	5	..	5	..	5	..
Wool flock	3	3	..	3	..	2	1
Cotton flock	3	2	1	2	1	..	3
Wadding	1	1	..	1	..	1	..
Nylon filling	1	1	..	1	..	1	..
Foreign—							
Kapok (Java)	4	4	..	4	..	4	..
Kapok (Indian) ..	1	1	..	1	..	1	..
Kapok (Unknown) ..	2	1	1	1	1	1	1
Fibre (Unknown) ..	20	7	13	10	10	18	2
Totals	64	48	16	51	13	51	13
		64		64		64	
Per cent. passed 1948-49 ..	..	75		79.7		79.7	
Per cent. passed 1947-48 ..	..	73		73.9		74.9	

This summary shows an improvement in the condition of materials over the 1947-48 samples.

A number of firms have ceased to handle “previously used” materials in favour of new filling substances due to the Regulation requirements of cleansing and disinfecting of “used” or second-hand materials.

The main camping areas were submitted to inspection prior to and during the Christmas-

New Year holiday season. The councils concerned were notified in advance of the opening of the season of the department’s requirements in regard to the standards laid down in “The Camp Regulations, 1949.”

Departmental officers maintained constant supervision during the peak period and submitted reports from which the following table was compiled:—

TABLE XXXIX.

Local Authority.	Estimated Number of Campers.*	Number of Camps.	Number of Camps Accommodation Adequate.	Number of Camps Water Adequate.	Sanitation.
Coolangatta—					The cleanliness and sanitation of all camps was a marked improvement on previous years. Nightsoil and refuse removal services were maintained at a high standard.
Council	2,380	9	6	9	
Private	496	13	9	8	
Nerang—					
Council	1,932	4	4	3	
Private	322	6	3	6	
Southport—					
Council	1,848	6	4	6	
Private	504	5	4	5	
Landsborough—					
Council	1,070	5	..	2	
Private	184	3	1	3	
Redcliffe Council	2,765	15	15	15	
Cloveland Council	485	3	1	1	
Tingalpa Council	170	2	..	..
Caboolture Council	300	2	..	2	
Noosa—					
Council	740	3	1	3	
Private	75	1	1	..	
Maroochy Council	2,600	4	2	4	
Burrum Council	1,200	8	1	2	
Livingstone Council	1,700	5	..	3	
Mulgrave Council	463	5	2	5	
Douglas Council	156	3	..	1	
Johnstone Council	339	4	3	4	
Cardwell Council	25	1	1	1	
Pioneer Council	170	2	2	2	

* Estimate is based on the minimum of 4 persons per tent or caravan. Many isolated and small camps are not included in the above figures.

Inspections of licensed premises are shown in the table hereunder. Annual inspections in country areas were carried out by State inspectors when on tour and full reports submitted to the Licensing Commission for necessary action. General inspections, which covered sanitation only, were made within the metropolitan area. Restrictions still prohibit any extensive alterations, renovations, or rebuilding, all of which are necessary to bring the majority of hotels up to a reasonable standard.

Area.	No. of Annual Inspections.	No. of General Inspections.	No. of Plans Examined.
Metropolitan .. .. .	..	130	} 44
Country	142	54	
Totals	142	184	..
Grand Total .. .. .	..	326	

TOOWOOMBA SUB-OFFICE.

Places Visited.—Inspections were carried out at Toowoomba and the following country centres:—Allora, Amiens, Applethorpe, Ballandean, Bell, Bowenville, Cabarlah, Cottonvale, Crow’s Nest, Dalby, Dalveen, Drayton, Emu Vale, Freestone, Gladfield, Glen Aplin, Goondiwindi, Gowrie Junction, Hampton, Helidon, Highfields, Jandowae, Jimbour, Jondaryan, Kaimkillenbun, Karara, Killarney, Kingsthorpe, Kogan, Leyburn, Macalister, Maryvale, Merin-gandan, Oakcy, Oman-ama, Peehey, Pozieres,

Sandy Creek, Stanthorpe, Tannymorel, Tara, The Summit, Thulimbah, Texas, Wallangarra, Warra, Warwick, Witheott, Wyreema, Yangan, and Yelarbon. The number of miles travelled on these inspections outside Toowoomba was 2,289.

Local Authority Supervision.—The summary of work carried out under this heading as as follows:—

Area.	First Inspection.	Re-Inspection.	Official Calls.	Reports.	Towns.
Headquarters	898	19	195	74	..
Country	640	..	23	122	51
Totals	1,538	19	218	196	51
Grand Total .. .. .	..	1,775		..	

These inspections comprised aerated water factories 14, bakehouses 90, barbers 74, cafes and stores 520, chemists 37, convalescent home 1, drainage 30, flies 7, food factories 69, hotels 138, incinerators 9, laneways 25, mosquitoes 4, piggeries 2, public conveniences 73, rats 11, refuse removal 2, refuse tip 57, sanitary conveniences 168, sanitary depots 25, showgrounds inspections 150, sewerage treatment works 2, stables 27, subsidy 3, swimming pool 3, tourist camp 1, water samples 8, water supply 3.

Licensed Premises.—General licensing inspections of the hotels in the district was not undertaken during the year, but at the request of the

Licensing Commission, all hotels at Warwick were inspected and Toowoomba hotels are listed for early attention. Following the Warwick inspections, orders embracing all of the recommendations submitted have been served by the Commission.

During the year numerous plans and specifications of proposed alterations and additions to licensed premises in the district were examined and reported upon and inspections made when work was in progress or completed. This phase of the work, while taking up considerable time, is important in that many faults of design or sanitary principles are eliminated before the plans are approved by the Commission rather than after completion.

In Toowoomba and at all places visited inspections of bars, sanitary facilities, and drainage disposal were made and any urgent matters reported for attention. Mechanical glasswashing apparatus has been installed or ordered in hotels situated in the major centres and improvements in washing facilities at several hotels in smaller places have been effected.

In general, the standard of accommodation at hotels in the district has been maintained, but much remains to be done in the way of alterations, increased and modernised sanitary and bathing accommodation, &c., before the position can be claimed to be satisfactory.

Nightsoil and Refuse Removal.—The conduct of these essential services was found to be of a reasonable standard. In a number of cases recommendations were made for improving or altering existing facilities to allow of increased efficiency in disposal and the Local Authorities concerned readily made the necessary arrangements.

At Oakey, in the Jondaryan Shire, the sanitary depot has been considerably improved by levelling the burial area and a new shed to house the plant has been approved. The condition of the public dry refuse tip at this centre left much to be desired and steps have been taken to bring it into conformity with accepted practice.

The sanitary service for the Drayton Shire, deferred previously because of high tenders, commenced operating during the year and, so far, has been efficiently conducted. Under the recent amalgamation of areas Drayton Shire has ceased to exist and the area where the service operates is now part of Toowoomba city, which council will assume responsibility for its correct conduct.

In Toowoomba the sanitary and refuse removal services were conducted satisfactorily, but there are still several semi-rural areas which should in the interests of public health, be included in the collections. The council is taking action along these lines and the coming year may see their inclusion.

The new service for the Wambo Shire, which replaces a number of small contracts for the various towns, is scheduled to commence operating as from now.

A special visit was made to Killarney to investigate complaints concerning the unsatisfactory location of the sanitary and refuse depots. The complaints were not substantiated and no action for removal was recommended.

Following recommendations from this Department the sanitary and refuse depot at Acland has been overhauled during the year. Increased

water supply has been provided and the whole area cleansed of the accumulation of heavy non-combustible material which formerly interfered with systematic operation.

Sewerage.—Sewerage is installed in Toowoomba (part only), Warwick, and Goondiwindi, and the various plants functioned satisfactorily during the year. No new reticulation was carried out in Toowoomba, where a large part of the residential area is outside the system and there are still many dwellings within the sewered area which are not connected. This latter is causing concern and some definite action in the matter is indicated.

At Dalby, where plans for sewerage reticulation have been completed, the projected early start on the scheme has been postponed because of material shortages and greatly increased costs.

A sewerage scheme has been proposed for the town of Oakey, incorporating the disposal plant formerly operated at a defence establishment, but the project is still only in the preliminary stages.

Water Supply.—No new reticulated systems were opened during the year. Work is proceeding on the St. George cold-water system and preliminary investigations are still in hand for supplies at Pittsworth, Millmerran, and Jandowae. Work on the Stanthorpe Shire Council's schemes for Stanthorpe and Wallangarra, previously reported, has not yet commenced. The town of Oakey has proposals for a supply in connection with its sewerage scheme.

Of all the systems operating, as listed above, only that at Dirranbandi can be classed as complete. The Dalby supply, while procured from deep bores, is not palatable and generally unsuited for many domestic purposes, while none of the others is equipped with a filtration plant. In the smaller centres effective chlorination would probably be an adequate safeguard, but the systems at Toowoomba, Warwick, and Goondiwindi should be supplied with modern filtration equipment at the earliest opportunity.

Both Toowoomba and Warwick have let contracts for the cement lining of some older mains to eliminate rust from the supply.

Mosquitoes.—The work of mosquito eradication and control continued throughout the district with varying success. The city of Toowoomba remains comparatively free of mosquitoes, but reports and complaints from outside the sewered area were more frequent than in former years, indicating that more intensive control measures are essential if this happy condition is to be maintained. In the majority of cases investigated by this Department infestation was traced to household wastewater sumps, and as the bulk of new home building is now outside the sewered area the correct construction of these sumps to prevent ingress of mosquitoes will be an important factor in future control.

The progress of works in connection with creek improvement, for which the Toowoomba City Council has been granted a loan and subsidy of £10,000, has been slow and only a small portion has been completed to date. Application has now been made for a further loan and subsidy of approximately £7,000 to enlarge on the previous proposals and to meet increased costs of labour and materials.

At Warwick control of mosquito breeding has been maintained and the great improvement of the past few years is still evident. Further work on desnagging of the Condamine River to facilitate control and elimination of breeding grounds has been carried out under the subsidy scheme, while a further subsidy was granted to provide for the drainage of low-lying land adjacent to the river.

Good reports of decreased infestation have been received from Dalby and work on the subsidised scheme of drainage at Inglewood has been completed.

Applications for subsidies have been received from the Stanthorpe Shire Council for mosquito prevention works at Stanthorpe and Wallangarra, but these have not yet been finalised.

Rats.—Except in the several large centres, rats are not prevalent in the area. Goondiwindi, which was reported last year as being heavily infested, now appears to have the position under control, and the recent appointment of a health inspector in the area will assist materially in regaining and keeping the comparative immunity of former years.

In spite of constant baiting, both by the council and occupants, the rat population of the business section of Toowoomba remains heavy. The council realises the necessity for increased action and is seeking additional staff to allow of the placing of a man permanently on rat control as was the former practice.

Special investigations were made at Jimbour and Macalister, in the wheat belt, in an effort to trace the origin of rats infesting wheat trucks unloaded at Rockhampton from these centres. Inspections revealed no infestation at the wheat sheds at either place, and as the type of rat involved has rarely been reported in the district it would seem certain that the infestation occurred at one or more of the railway yards *en route*.

Flies.—Summer-fly infestation is still heavy throughout the district, and while the numbers are largely of the type associated with sheep and cattle country the ordinary house fly is more prevalent than it should be. In this connection, the newly-elected Toowoomba City Council has incorporated the elimination of flies in the city as part of its policy and a vigorous campaign is expected in the coming summer, when all potential fly-breeding grounds, particularly stables, will be subjected to intensive supervision.

Toowoomba Show.—Sanitary arrangements at the Royal Agricultural Society's annual show were subjected to strict supervision and the standard maintained throughout the week was very satisfactory. The projected transfer of the showgrounds to Harristown is still in the preliminary stages and probably will not be effected before the next show.

Health Education.—Activities in this field continue to expand throughout the district—largely through the facilities made available by the Health Education Council. The majority of the Local Authorities have taken advantage of the posters, literature, &c., issued by this body and have brought them prominently before their citizens.

The city of Toowoomba again conducted a Health Week. This included poster displays in various parts of the city, radio talks, lectures,

and film displays to public bodies and school children, and daily press publicity to which this Department contributed.

Retirement of Toowoomba City Inspector.—Towards the end of the period the Toowoomba City Inspector, Mr. W. D. Rees, tendered his resignation to the City Council because of ill-health. Mr. Rees has devoted many years of unselfish service to the city of Toowoomba, and the continued high standard of sanitation prevailing in this centre is due largely to the enthusiastic and conscientious manner in which he discharged his important duties. His ready co-operation in all matters pertaining to the health of the community was always forthcoming and advice of his retirement is received with deep regret.

General.—During the first six months of the year the services of an assistant inspector from Head Office were made available and the arrangement proved highly satisfactory, relieving for a time the staff disabilities of the sub-office.

So far as Local Authority health inspectors are concerned the position has greatly improved, and only one area in the district, the Balonne Shire, is now without the services of an inspector. The rearrangement of Local Authority inspectors' districts came into force at the beginning of the period and the reduced areas have proved very satisfactory to all concerned. As usual, the various Local Authorities and their officers have co-operated well in the maintenance of health standards throughout the district.

ROCKHAMPTON SUB-BRANCH.

General.—Marked sanitary progress achieved in some local-authority areas was in distinct contrast to the lack of advancement in others. That some councils have consistently failed to accord attention to health requirements brought under their notice from year to year is to be deplored. In a few instances inability to secure the services of qualified health inspectors has been a contributing factor. In others the main retarding influences have been apparent lack of health consciousness and reluctance to vest in inspectors specific authority and responsibility essential to carrying out the provisions of the Health Acts and Regulations.

Where inspectors are required to prepare budgets covering the year's requirements—incidentally, the monies involved are largely recoverable—and are authorised to operate within the scope of their budgets, health services function smoothly and improved sanitation is both noticeable and assured. This policy might well be adopted by other local authorities in which reports and recommendations submitted by its own officers or by this Department seldom get beyond the health committee or the council table. It must be impressed upon the apathetic that carrying out of the provisions of the Health Acts and Regulations is mandatory and not a whim for decision by council policy.

Many Local Authorities were assisted in securing nightsoil pans, garbage bins, and other equipment or materials for same. In spite of the continued general shortage of such items no serious delays occurred where orders were placed in good time and this office was notified.

HEADQUARTERS AREA (City of Rockhampton).

Systematic house to house inspection improved for a time but was reduced when a part-time inspector resigned to take up duties with another Local Authority.

However, the numerical strength of the inspectorial staff has at no time been sufficient to ensure every premises receiving at least an occasional visit.

The city continues to expand with the construction of many new homes, shops, &c. Difficulties associated with the disposal of household waste waters in new residential localities call for a good deal of attention by council officers.

A continuous policy of bituminising city streets and roads is relieving many householders of the discomforts caused by dust and at the same time improving the appearance of the city. Picturesque street garden plots established in recent times and ornamental tree planting constitute worthwhile improvements.

Sewerage.—The sewerage system was extended by 24,315 feet of new sewer lines and connection of premises thereto.

Preliminary work on the sewerage of the Park avenue area commenced. This comprises section 8, estimated to cost £122,396. Part 1 is estimated to cost £10,989, of which amount £3,000 was allotted up to 30th June, 1949.

Application has also been made for £20,000 to extend the sewerage system to another section of North Rockhampton, taking in an area in the neighbourhood of Salamanca street.

The number of sink and hand-basin wastes discharging to street water channels in the city proper was further reduced. The remainder are receiving attention as the services of plumbers can be secured.

Nightsoil Disposal (Pan Removal System).—Removal services were performed efficiently as formerly. Operations at the disposal and panning depots were effectively conducted under proper supervision. Change over from the old horsedrawn wagons to motor transport again failed to materialise. It is understood that the council now proposes to utilise for this purpose chassis of some of the better-conditioned private buses bought in when taking over these services.

Stormwater Drainage.—A proposal to improve stormwater drainage in the vicinity of Fitzroy street and Denison lane, where serious flooding occurs after heavy rain, at a cost of £3,762 was approved. This work is now being taken in hand.

No move was made to provide stormwater drainage for the Park avenue and Queen's Park contiguous areas, nor to replace very bad street water channels in several city lanes. Although the necessity for action in regard to these matters has consistently been brought under notice, at the time of compiling this report there was no indication of provision being made in the council's budget for the forthcoming year.

Refuse.—Refuse removal services were carried out satisfactorily, very few complaints with regard thereto being recorded at this office. Horsedrawn drays are the vehicles used. The aggregate of time taken up by this mode of transport in travelling to and from the tips is considerable. Much of this time could be saved by using motor trucks. The greater loads carried

by the latter would result in a reduced number of trips required and further saving of time.

Once again it is reported with regret that the City Council has made no progress in supplying refuse containers to premises, for which service it is legally responsible. This deficiency has been commented upon annually for a good many years. In this particular respect the city compares unfavourably with many country towns. Protection of waste matters against accessibility to such disease disseminators as rats, flies, and cockroaches is as important as it is elementary. Unfortunately, many good citizens who have themselves secured containers remain exposed to the dangers arising from premises of neighbours who are not so particular.

The City Council latterly endeavoured unsuccessfully to procure materials for the manufacture of refuse containers. It is more probable that readymade bins could be secured from time to time in reasonable quantities from local manufacturers. This course may be adopted in the near future.

Rats.—The rat-destruction gang continued operations throughout the year. From observation the rat population has shown a falling off in numbers. A much greater reduction can be expected when all premises are supplied with standard lidded refuse receptacles and building contractors are able to undertake work on many of the city's older business premises, where rat-proofing measures will be insisted upon.

Flies.—The *Musca domestica* species was slightly more prevalent at times, more especially in localities containing stables, and coinciding with humid weather conditions. During the warmer months a regular check should be kept on stables and also on premises to which manure is removed in quantity for use on garden plots.

Mosquitoes.—Organised control-operations by the mosquito reduction gang and elimination of breeding by draining and filling in some of the low-lying water retaining areas have considerably reduced normal prevalence. Heavier incidence has been confined to periods following excessive rain, when the extent of temporary collections of surface waters was beyond the scope of the spraying gang.

The City Council budgeted for expenditure of £1,457 on mosquito control work for the year and was granted this sum by the Government in loan and subsidy of equal amounts. This amount had been overspent at the end of the tenth month and the total cost for the fiscal year would be in the vicinity of £1,725. In the coming year D.D.T. sprays are likely to be used more extensively, as results have proved to be more lasting when D.D.T. is incorporated, so that less frequent spraying is necessary.

Loan and subsidy totalling £850 was secured for the purpose of mosquito eradication work consisting of improvements to drainage through the town common. Approximately one-third of this amount had been absorbed to date.

Of approximately 8,000 household rainwater tanks in the city area some two-thirds are said to be not mosquito proof, due mainly to badly fitted or displaced screens. These remain the chief breeding grounds for *Aedes aegypti*, which constitute a serious menace as disseminators of dengue fever. In these times it is most difficult to secure plumbing labour for such small jobs as tank screenings, which in the circumstances

would be better undertaken by the Council itself.

Aedes vittiger again appeared for a time following heavy rain. Although this species is not a known vector of disease its vicious bite causes annoyance.

Show Grounds.—Sanitation at the Rockhampton showgrounds was kept under supervision when the grounds were in use. The controlling body was informed of permanent improvements required to be undertaken during the next twelve months.

State School Swimming Pools.—Using a chlorotex outfit the water in swimming pools at two State schools was tested during summer months when the pools were in use. Results of eleven tests at each pool set out below show that chlorination was efficient and seldom excessive:—

	Parts per million.
Allenstown State School . .	.6, .5, .7, .4, .4, .4, .5, .6, .5, .4, .5
Central Girls' State School . .	.4, .5, .5, .5, .4, .5, .55, .5, .4, .4, .5

Barbers' Shops.—Few inspections were possible, due to lack of staff.

COUNTRY.

Many country towns were not visited, due to pressure of duties in other directions. Sanitary progress being made by some local authorities in contrast to the apathetic approach by others is commented on in the first part of this report.

Places visited were:—Ambrose, Anakie, Bajool, Biloela, Blackwater, Blair Athol, Bluff, Bogantungan, Bouldercombe, Bowman, Calliope, Capella, Clermont, Comet, Cracow, Dingo, Duaringa, Emerald, Emu Park, Gladstone, Gogango, Gracemere, Langley, Longreach, Kabra, Keppel Sands, Kalapa, Kemp Beach, Kooltandra, Mount Larcom, Mount Morgan, Mulambin, Neerkol, Ogmoo, Raglan, Rubyvale, Sapphire, Shoal Bay, Springsure, Stanwell, Styx, Theodore, The Caves, Warren, Westwood, Yeppoon. Total number of visits made was 130. Distances travelled by motor vehicle and train totalled 7,081 miles.

Banana Shire.

No general inspection visit to this area was made. Sanitation was stated to be progressing under efficient supervision and cleansing services operating satisfactorily.

Bauhinia Shire.

On a visit to the town of Springsure the method of disposal of nightsoil was found to be unsatisfactory and resulting in fly breeding. The refuse tip was found to be out of control. The council was instructed to have these matters put in order. When subsequently visited fly breeding was again in evidence. The contractor was given instructions in regard thereto. The refuse tip had been levelled ready for covering when a 'dozer had been repaired.

Belyando Shire.

Clermont.—The method of disposal of refuse was found to be unsatisfactory; earth closets were in need of repairs; several premises were without refuse containers. In reply to com-

munications the council advised that the refuse tip would be brought under control and that the other matters would receive attention when the services of a health inspector were secured.

Blair Athol.—Here the area used for disposal of nightsoil was found to be worked out; there was an accumulation of uncovered refuse at the tip; refuse containers were lacking on a number of premises. The Council advised that a new site for nightsoil has been obtained and buildings, &c., transferred to it; due to shortage of materials, refuse containers could not be procured at the time.

Barcoo Shire.

Stonehenge, Jundah, Windorah.—The Council replied with regard to recommendations submitted during June of the previous year that—(1) Cesspits would be sprayed with a D.D.T. solution when labour was available; (2) refuse tips would be put in order when a 'dozer was being operated in the vicinity; (3) river water reticulated was not used for drinking purposes while rainwater supplies were available, and the extra expense which would be involved in chlorination was not considered to be justified.

Blackall Shire.

Loan and subsidy each of £627 were granted by the Government for drainage and mosquito eradication works on certain low-level ground in the town of Blackall.

Calliope Shire.

Mount Larcom.—Refuse at the tip required covering with earth. The council advised that the contractor had been instructed to do this work.

Boyne Valley Townships.—A new nightsoil disposal depot to serve all of these townships was equipped and put into use. A new refuse tip was formed at the same site.

Duaringa Shire.

Duaringa.—Recommendations submitted for attention by the council included—regular tarring of nightsoil pans; selection of a new site where disposal of refuse could be effectively controlled; action be taken to repair non-flyproof pan cabinets.

Bluff.—It was found necessary to repeat the recommendations for sanitary improvements mentioned in last year's report. A special visit was made to this coalmining township in connection with water-supply difficulties during a time of severe drought. Many residences were inadequately equipped for even normal storage of rainwater supplies, some having none. Water being used was taken from dams in the vicinity or from the Comet river, delivered by rail. Samples secured and analysed showed that the waters were unfit for human consumption. Chlorination and clarification were recommended.

Emerald Shire.

Emerald.—Recommendations submitted to the council as the result of a survey of this town were as follows:—That action be taken to ensure a continuous supply of water for nightsoil pan cleansing operations; that disinfection of pans

be effected in the prescribed manner; that trenching of nightsoil be carried out in accordance with regulations; that the nightsoil-removal vehicle be equipped with a proper body; that refuse dumped in washaways be progressively covered; that supplies of refuse containers be secured and distributed. The council advised that these matters were receiving attention.

Bogantungan, Anakie, Sapphire, Rubyvale.—The council was requested to have cesspit closets brought up to standard, arrange regular collections of refuse from premises, and establish proper tips.

Fitzroy Shire.

The council again failed to inaugurate the pan system of nightsoil disposal from several townships, although from time to time different sites for a depot were inspected and reported as being suitable. This matter has been under notice for a very long time. The area was again without the services of a health inspector during the latter part of the year. No move towards the filling of the vacancy appears to have been made.

Gladstone.

Bad sanitary features listed in last year's report mostly remained uncorrected, although from time to time the council advised that these were receiving attention. This Department is insisting upon action being taken. Items requiring finality include—establishment of a sanitary depot where disposal of nightsoil and cleansing and tarring of pans can be effected (at present, due to the absence of a water supply at the disposal ground, pans have to be transported to a separate inadequately-equipped depot for cleansing, &c.); supply of standard-lidded refuse containers to all premises; renewal of defective street water channels, some of which convey sewage; control of mosquito breeding by spraying collections of surface water; sanitary improvements at a beach picnic area and car park. Negotiations were proceeding to secure possession of a newly-selected site for a sanitary depot.

Progress on the Happy Valley drainage-mosquito eradication works financed by Government loan and free subsidy grant was well advanced.

Preparations for a complete sewerage scheme were also in hand.

Two new proposals for drainage and mosquito eradication works respecting which the council sought loans and subsidies were investigated and reported on. The applications were recommended for approval subject in the one instance to the proposal being extended to include the lower section of a mosquito-breeding area so as to attain eradication. The council gave the necessary assurance and is having plans and estimates prepared.

The port of Gladstone, already important as the outlet for exports from the local meatworks, appears to be on the eve of vast expansion as a coal port. With unlimited supplies of coal and water available it is likely that secondary industries will follow. It thus behoves the council to press ahead with all matters relating to good sanitation.

Livingstone Shire.

Sanitary progress is becoming conspicuous in this area. An organised clean up and removal of every kind of refuse from all premises in the main town—Yeppoon—was carried out. The other towns in the area are listed for similar attention. Several hundreds of new standard refuse containers were obtained and distributed to householders. This programme is being continued until all premises in localities serviced with removals are adequately supplied with bins. Similar action is being taken to replace all defective earth-closet pan cabinets with new ones of standard flyproof design. The council secures them in numbers, resulting in purchasers obtaining them at minimum cost. No great finance is involved as, after the first consignments, the costs of subsequent supplies of bins and pan cabinets are covered by receipts from sales of the preceding issues.

Mosquito-breeding control is being effected by spraying collections of surface waters. In the town of Yeppoon drainage works designed to eradicate mosquito breeding in lowlying sections are being undertaken with the aid of Government loans and subsidy grants.

Work on the conversion of an open sewer in Yeppoon to a closed one is well advanced. This project had been advocated for a number of years. However, the present scheme is wider in scope than the original and when completed will abate a long-standing nuisance besides improving stormwater drainage and eliminating mosquito breeding.

The Livingstone area carries a heavy responsibility in the necessity of providing facilities for seasonal influxes of population along its seaboard, including the towns of Yeppoon, Emu Park, and Keppel Sands, also five main camping grounds, picnic and angling spots. All of these were under constant supervision by the council's health inspector and this Department's officer throughout the Christmas-New Year vacation and were again visited during the Easter period.

Ample provision was made to cope with nightsoil and refuse removal services, and operations at the disposal and cleansing depots were performed efficiently.

Camps were well set out and good sanitation maintained. The few who established camps at places where no sanitary or other conveniences were provided were required to move at short notice.

Many improvements of a permanent nature are being undertaken or provided for. Loans and subsidies for some of these have been granted and approval of the remaining applications have been recommended by this sub-office.

Work on the provision of a reticulated water supply for Yeppoon has commenced. Bathers' dressing-rooms with lockers, freshwater showers, and additional septic sanitary conveniences, all of modern construction, are already planned, as are reticulated water supplies to camping grounds.

Sanitation at the smaller inland townships has not been neglected, and measures adopted should produce notable results in the coming year.

The old sanitary depot at Ogmoo remained in use due to wire required for fencing the new site not being available. The wire was recently

procured, so that the new depot should be established in the near future.

Bad sanitation at the Railway camps at Bowman and Kooltandra came under notice. The General Manager for this Division lost no time in taking requisite action when the conditions were reported to him.

Longreach Shire.

No opportunity occurred to visit this area for general inspection purposes. However, it is understood that sanitary advancement is being maintained. Government subsidy was availed of to continue control of mosquito breeding.

Mount Morgan Shire.

This Local Authority has at last been successful in appointing a full-time health inspector. Reports to hand indicate that good progress is already being made in correcting bad sanitary features which have existed for many years. Steps have been taken to secure and distribute refuse containers, and a similar policy with regard to pan cabinets is expected to be adopted.

The necessity for a full refuse removal service for the town was again brought under the notice of the council. There is no reason why this should not be finalised at an early date.

Peak Downs Shire.

Capella.—Following an inspection of this town sanitary conditions generally were reported to be satisfactory.

DETAILS OF INSPECTION.
(ROCKHAMPTON AREA).

Area.	Number of First Inspections.	Number of Re-inspections.	Official Calls.	Number of Reports Submitted.	Number of Towns Visited.
Headquarters	398	35	181	59	..
Country	1,568	..	58	..	46 (130 visits)
Totals ..	1,966	35	239	59	46
Grand Total	2,240				

The above inspections were made in connection with—Barbers' shops 24, cafes (sanitation) 34, camps 66, drainage 89, hotels 102, mosquito infestation and eradication works 52, nightsoil disposal depots 50, picnic ground 39, rat infestation and proofing 60, railway property 4, refuse removals (premises) 312, refuse tips 38, sanitary conveniences 990, sewerage 14, swimming pools 21, water supplies 57, wharves (visits *re* shipping) 49.

LICENSED PREMISES.

Area.	Hotels.	Repotrs.
Headquarters	58	53
Country	44	13
Totals	102	66

Four hotels were inspected in connection with proposals to provide septic installations and improve bathroom facilities.

All hotels in the city and district of Rockhampton were subjected to complete annual inspection. Reports thereon, together with recommendations for improvements, were submitted to the Licensing Commission.

The Commission cancelled the licenses of four city hotels whose continuance was considered to be not justified. The owners of several others were given the opportunity of justifying their licenses by extensively improving their hotels to a standard acceptable to the Commission. Plans are expected to be ready for placing before the Commission in the immediate future.

TOWNSVILLE SUB-OFFICE.

SANITATION GENERALLY.

Hotel Licensing.—Despite the fact that annual licensing inspections had not been carried out regularly during the past few years in Townsville owing to war time conditions, shortage of material and other reasons, many special inspections were made during the year, particularly where owners had arranged to carry out improvements irrespective of the requirements of the Commission. However, as a result of instructions issued to officers to resume annual inspections, considerable improvement in the general condition of hotels, especially regarding sanitary and bathing facilities, can be expected during the next financial year.

Much time was devoted to work under this heading in consultations with owners and architects, perusal of plans and specifications, &c.

Mosquito Eradication and Control Schemes.—The Townsville City Council have two schemes in operation under the loan and subsidy conditions laid down by the Treasury Department, one being for the amount of £43,000 and the other £1,058. Work included in the former amount consists of the construction of drains through lowlying areas, &c., whilst actual mosquito control and destruction work is performed under the latter scheme.

Rat Control.—The number of men engaged by the City Council on rat-destruction work remained at three for the greater part of the year—two of whom carry out house-to-house visits within the city area.

Rat returns have shown an increase in the number of rats destroyed weekly under the present scheme and it should be the duty of the council to maintain it. Unless sufficient men with properly trained dogs are employed on this particular work continuously proper control cannot be exercised over the rat population.

Sewerage.—Sections 1 to 6 (comprising city area, South Townsville, Railway Estate, Hermit Park, and West End)—During the 12 months ending 30th June, 1949, 61 new houses were connected to the sewerage scheme in sections 1 to 6, and approximately 7,000 feet of 4-inch sewerage pipes were laid to same. Also connected in these sections were 19 houses which were included in the original scheme in which approximately 800 feet of 4-inch pipe was laid.

Section 7—North Ward sewerage (comprising the balance of the main city area)—In this area 48 tenements are connected to the sewer totalling 91 pedestals which are rateable. Approximately 5,400 feet of 4-inch reticulation main has been laid. Pedestals are installed in 53 additional tenements awaiting connections to council sewer.

Main sewers in this section are 90 per cent. complete. One pump well is complete with pumps installed. The remaining pump well is under construction. The scheme is being seriously retarded by lack of earthenware pipes and fittings, particularly in the 4-inch size.

General.—In addition to all other duties, matters of general sanitation within the city area have received attention from time to time. Such duties included water sampling, inspections of sanitary and refuse depots, sanitary conveniences, river pollution, sewerage and drainage works and complaints, camping sites, hospitals, and such other matters under the jurisdiction of this office.

COUNTRY.

Towns within this sub-office area visited during the year included Ayr, Bemerside, Charters Towers, Cloncurry, Halifax, Home Hill, Hughenden, Ingham, Julia Creek, Macrossan, Major's Creek, Mount Isa, Paluma, Prairic, Richmond, Torrens Creek, and Trebonne.

Ayr.—A special visit was made to the Ayr Hospital for the purpose of inspecting and reporting on the necessity of an improved septic system at the staff quarters. Recommendations in connection with the inspections were submitted to headquarters for approval.

Hughenden.—The Hughenden Town Council will be the next western Queensland town to operate a sewerage system. An inspection recently revealed that the reticulation work was well advanced and in some instances pipes had been laid through premises up to the site of the respective sanitary fittings. Unfortunately, some property owners were reluctant to have the sanitary fittings placed within or even in close proximity to the residence, which fact rather defeats one of the main advantages of a sewerage scheme. However, it is anticipated that within a short period after the plant is in operation the few referred to will realise their mistake.

Thuringowa Shire.—One case of encephalitis and one case of diphtheria (fatal) were reported from Paluma and Major's Creek respectively. The usual action of inspection, disinfecting, and swabbing under the direction of the council's medical officer of health was taken in these instances. During the course of inspection it was revealed that immunisation against diphtheria had not been carried out in the Major's Creek and other adjoining areas for some years, and recommendations to resume were brought under the notice of the Local Authority.

Cloncurry.—Results of inspections made in this town disclosed that an improvement is necessary in regard to general sanitation. Owing to the lack of good drainage facilities recommendations were submitted to headquarters suggesting that the Local Authority should give consideration to the question of providing a sewerage system similar to other Western towns. Disposal of waste waters, effluents from septic tanks, &c., cannot be dealt with by absorption in this particular type of soil and it would appear that a sewerage system is the only solution.

Hotel Licensing.—Annual inspections of licensed premises were carried out in Hughenden, Cloncurry, Mount Isa, Prairic, Torrens Creek, Julia Creek, and Richmond. In all instances recommendations were made in relation to every hotel inspected with the object of

having the necessary action taken by the Licensing Commission.

During a visit to Hughenden advantage was taken to interview respective hotel owners and advise them in respect to the sewerage installations about to be provided, suitability of sites, fittings &c., as shown on their plans.

CAIRNS SUB-OFFICE.

Duties carried out during the year include inspections of drainage, nightsoil disposal and removal services, refuse disposal, sanitary conveniences and depots, beach sanitation, rat, fly, and mosquito infestation, and other similar matters, whilst inspections and investigations have been made of existing and projected anti-mosquito measures. Licensing inspections of hotels have been carried out where possible.

Details of inspections and miles travelled in the course of such inspections are listed hereunder.

Cairns City.

The paucity of complaints received by this office in regard to the carrying out of nightsoil and garbage collection and disposal indicated that such essential services were well maintained. Regular inspections were made of the nightsoil incinerator and refuse tips.

The subject of nightsoil disposal naturally brings up the question of sewerage. The consulting engineers for the sewerage scheme have offices in Cairns and are pushing ahead with detailed plans. It is not a project that can lightly be entered into as an ample water supply and an assured supply of materials, once the scheme is embarked upon, are necessary. A water supply will be provided on the completion of the Behana Creek scheme, which is now proceeding and it is hoped that the supply of materials will not unduly delay the completion of this work and the inauguration of the sewerage scheme.

Mosquito prevention work has proceeded to the limits of the Council's staff. A regular roster of spraying, clearing of drains, &c., was adhered to, and relief was afforded the Local Authority by the provision of 50 per cent. subsidy for this essential work. Drainage and reclamation projects from time to time engage the attention of the Local Authority with beneficial results. The time is approaching when some of the subsidiary drains will no longer have a useful purpose due to reclamation of lowlying areas, but the main drains will always be needed. Every possible endeavour should be made to have these drains permanently constructed, so as to make a more effective job and reduce maintenance costs.

The levelling of properties to road level and the reclamation of lowlying lands for building purposes have, over the past few years, made an appreciable and welcome change in the appearance of certain parts of Cairns, and a continuance of this good work is most desirable. In this regard, the Cairns Harbour Board made quite an appreciable contribution by the reclamation of many acres of land in the vicinity of the wharves and Alligator Creek. The carrying out of a project between the bodies concerned for the reclamation of Lily Creek from Spence street to the Inlet will put this section of the town in very good shape.

Continual attention has been paid to the rat menace and good and consistent work has been done. The further availability of materials and lifting of restrictions could assist a great deal in this matter by permitting attention to any premises which, by reason of their construction, afford harbourage.

Immunisation was proceeded with and the percentage of non-immunised children in the area is now small indeed.

Mulgrave Shire.

Essential services again functioned smoothly, with but one exception. The sanitary depot at Gordenvale, which has been adversely reported upon, remains a problem for the Local Authority. Its recognition of the necessity for some action is reflected in its project for a treatment works and effluent disposal at Simmonds Creek. Every difficulty in the way has now been overcome and it should not be long before it will be possible to close the Gordonvale depot and carry out disposal by the new means. The Local Authority is worthy of commendation for its effort in this regard.

The first section of the anti-mosquito drainage at Babinda was completed during the year and it is an efficient job. The improvement effected to the area is striking and the completion of the balance of the scheme will be a progressive measure.

This Local Authority has not been backward in regard to other drainage works and concrete channelling has been installed to the limits of manpower, materials, and finance at various parts of the shire.

Immunisation has not been neglected and the shire maintains its high record in this regard.

Beach sanitation is a matter which engaged the attention of this shire and continued progress is being made. An excellent job was performed by this Local Authority over the holiday periods. Continual inspections revealed well conducted services and amenities.

Johnstone Shire.

The essential services of nightsoil and refuse collection and disposal have been well done. In regard to nightsoil disposal, this shire is well advanced in respect to the installation of sewerage. Steps are being taken to improve the water supply, and the installation of sewerage would then appear to be contingent on the flow of necessary materials.

Immunisation has been vigorously pursued and a constant campaign always functions.

This Local Authority is keen on anti-mosquito works and a number of schemes were submitted for approval. Work done on approved schemes has shown the anticipated improvement in conditions. A continuance of such work is desirable.

Beach sanitation is not lost sight of and reports show that good control was effected. The provision of improved facilities as projected will enhance the position considerably.

Cardwell Shire.

Visits of inspection showed that essential services were functioning well, whilst other aspects of health work were not neglected.

Immunisation is a regular feature of this Local Authority's administration. Projects have been submitted for approval for anti-mosquito work. These have received due consideration and it is expected that the necessary work will soon commence.

A serious drainage nuisance at the hospital was the subject of recommendations, which would clear the situation.

Steps are being taken to augment the water supply, and this is a necessary preliminary factor in the installation of sewerage, a matter which the Local Authority has well in mind.

Douglas Shire.

This shire has suffered over the last year through the absence of a trained inspector and it is confidently expected that an appointment will be made during the present month. This should cause the desired improvement.

An inspection was made of a proposed new sanitary depot site and the necessary report and recommendation submitted.

Beach sanitation is now engaging the attention of this Local Authority and loans are being sought for the provision of the requisite facilities at the beaches under the control of the council.

Mareeba Shire.

Inspections revealed a reasonable state of affairs in regard to essential services, with an improved layout and construction of the sanitary depot at Mareeba.

Efforts are being made by this shire to improve the water supply of the town, whilst anti-mosquito works are functioning well.

Atherton Shire.

Essential services are functioning well in this shire, and in addition to the paucity of complaints inspections showed that conditions are satisfactory.

A full-time inspector for this shire makes possible the regular and frequent inspections so desirable in health work and no serious fault can be found in this area.

Eacham Shire.

Eacham shire employs a full-time inspector. Inspections revealed that all essential services were well conducted, whilst improvements at the depots were also evident.

Proposals for drainage works to alleviate a long-standing nuisance at Millaa Millaa were examined and the necessary recommendations made.

Herberton Shire.

The absence of an inspector in this shire led to a temporary arrangement for the use for one week each month of the inspector attached to the Eacham shire and definite improvement is noted as the result of his visits.

Anti-mosquito works already completed were found functioning well, whilst inspections were made of further proposals for the towns of Herberton and Ravenshoe. These worthwhile proposals were submitted for approval.

Etheridge Shire.

Visits of inspection were paid to towns in the Etheridge shire; the relevant advice was tendered for the correction of outstanding faults.

Cook Shire.

The relieving inspector proceeded to Cooktown at the first available opportunity after the cyclone early this year and assisted materially in clearing up insanitary conditions created by the cyclone. Wholehearted co-operation by the Cook shire led to a speedy rectification of health nuisances and the value of the efforts is best reflected by the fact that no serious diseases followed.

The various Local Authorities, and especially their health staffs, have done good work and gave earnest co-operation during the past year.

LOCAL AUTHORITY SUPERVISION.

Area.	First Inspections.	Re-inspections.	Official Calls.	Number Reports Submitted.	Number of Towns Visited.
Headquarters	543	11	129	3	..
Country ..	1,166	..	109	142	62 (163 visits)
Totals ..	1,709	11	238	145	..
Grand Total	1,958				

The above inspections included—Allotments (vacant) 22, anti-mosquito drainage 115, barbers 9, beach sanitation 359, bedding 8, chemists 21, cold stores 1, drainage 42, fly infestation 7, food factories 66, food premises 599, hospitals 6, incinerator 6, industrial hygiene 5, milk premises 15, mosquito infestation 6, premises generally 24, rat infestation 10, rubbish 40, sanitary conveniences 247, sanitary depots 25, warehouses 9, waters 63, and wharves 8.

LICENSED PREMISES.

Area.	First Inspections.	Re-inspections.	Number of Reports Submitted.	Number of Plans Examined.
Headquarters ..	30	..	28	5
Country	40	..	40	7
Totals	70	..	68	12
Grand Total ..	70			

The carrying out of the above inspections neecessitated the travelling of 8,663 miles by train, boat, and motor.

MACKAY SUB-OFFICE.

During the past year sanitary snrveys and inspections were carried out at North Mackay, Walkerston, Mirani, Eimeo, Glenella, Nandaru, The Leap, Kattabul, Mount Jukes, Seaforth, Bucasia, Slade Point, Calen, Proserpine, Bowen,

Merinda, Collinsville, Rosella, Sarina, Koumala, Carmila, and St. Lawrence.

City of Mackay.

Mosquito eradication works are being actively carried out and the mosquito projects for which 50 per cent. subsidy was granted made substantial progress. The Boddington street drain was completed during the year but, as yet, no start has been made on the Holland street drain, apart from the preliminary surveys. A campaign to control, in some degree, the mosquito breeding in tidal swamps on the city environs by spraying was undertaken by the city health inspector. It proved very successful and was greatly appreciated by the council and the people. The areas sprayed were Dump Creek, Town Beach, and Far Beach, at a cost of approximately £100, less 50 per cent. subsidy. Two men with equipment are permanently employed in follow-up work. It is hoped to commence filling in the larger depressions early next financial year.

Inspections of the sanitary depot and rubbish tip found everything to be in a satisfactory condition. The council have purchased a Sanivan to replace the old horsedrawn garbage wagons and it is expected to arrive early in July. It will be a decided improvement on the present methods in use here as well as being the first in Queensland. Its operation and scope will be followed with interest. A Government loan and subsidy were granted for this vehicle.

Further extensions to the sewerage system were made during the year.

A man, with dogs and baits, is permanently employed on the extermination of rodents. Last year's kill was 819 rats, 1,010 mice, and a total of 63,000 phosphorus baits laid.

A total of 146 children were immunised against diphtheria for this financial year. It is the practice to hold one campaign only per year. For a town of this size (approximately 15,000) at least four campaigns per year should be attempted, with immunisation against whooping cough as well as diphtheria. Figures disclose that the incidence of diphtheria is slight; no cases have occurred for the last two years. This may be responsible for the attitude of the council, but it is building up a false sense of security if the inference of these figures is believed.

The annual show of the Mackay and District A. and P.I. Assoeiation was held on 28th to 30th June last. Inspections of the grounds revealed that the basic necessities of sewerage and drainage were lacking. An excellent start has been made by the local inspeector and it is to be hoped that by next year some, at least, of these facilities are installed.

Bowen.

The sanitary conditions at Bowen were found satisfactory. A report was submitted on an application for loan and subsidy for camp improvements at Rose Bay.

Pioneer Shire.

Inspections of beach and camp accommodation at Seaforth, Bucasia, Eimeo, Slade Point, Seaview, and Baker's Creek were made and detailed reports furnished. Action is being taken by the council to institute improvements.

An inspection of the sanitary depots at North Mackay, Calen, and the new depot at Froggit's Paddock, Andergrove, revealed everything to be in a satisfactory condition.

A campaign against known breeding grounds at Bucasia was launched early in June last with the shire providing the materials and the farmers the labour. The health inspector reported an excellent start and if the follow up work can be maintained then a certain measure of relief can be expected.

No patrolling is done by the council in relation to rat control, but baits are obtained from the Mackay Town Council and the Cane Pest Board if required. Little, if any, interest is taken by the council in this source of disease. An inspection in the Mount Jukes area revealed rat infestation on two farms.

Children are immunised at any time by arranging an appointment with the medical officer of health. About forty per month are done.

Mirani Shire.

Mirani shire area was visited in connection with hotel improvements. A sanitary survey was made and sanitary conditions reported as satisfactory.

Sarina Shire.

Regular inspections of the effluent disposal area at Oonooie from the Australian National Power Alcohol factory were made. Disposal of the effluent without nuisance was maintained, and fly control strictly exercised.

The sanitary depot and rubbish tip, together with the seaside resorts of Sarina Beach, Campwin, and Grasstree, were inspected during the period.

In the township of Sarina no unfavourable sanitary conditions were reported.

In relation to mosquito eradication work, the drainage schemes in Leslie street, West street, and Brandon street were completed during the year.

Broadsound Shire.

The Broadsound Shire Council have not inaugurated a nightsoil removal service at St. Lawrence and the sanitary circumstances of this township have not improved.

Proserpine Shire.

The Proserpine Shire Council requested assistance in the selection of a site for a new sanitary depot. Inspections were made of a number of sites and reports submitted thereon.

General inspection of the township revealed that a reasonable standard of sanitation was being maintained.

Inspection of licensed premises in all places visited were carried out and reports submitted to head office.

Plans and specifications for six hotels for structural alterations and improvements to sanitary accommodation were examined and reports submitted.

Inspections carried out totalled—First inspections, 308; re-inspections, 59; official calls, 180; total, 547.

THURSDAY ISLAND SUB-OFFICE.

Local Authority administration was restored in Thursday Island with the re-formation of the Town Council at the beginning of the fiscal year, which gave direct and more adequate control of public health in the town.

Cleansing Services.—These services were taken over by the Town Council as from 1st January. A removal schedule was drawn up and a motor vehicle was employed on the work. This vehicle was very old and mechanically defective, and breakdowns caused serious interruptions to the schedule. A new vehicle was purchased by the council and removals are now being carried out without interruption.

The conduct of the sanitary depot has been satisfactory. A saltwater pump was installed for cleansing purposes in order to avoid the use of town water.

The disposal of refuse at the refuse tip was not satisfactory, due to the many breakdowns of the vehicle and it was necessary to employ extra labour and have the tip bulldozed several times during the year. Burning was regularly maintained at the tip to prevent fly breeding.

Sanitary Conveniences.—House to house inspections (269) of sanitary conveniences were made and 26 written notices and 64 verbal notices were issued for rectifying defective pan cabinets. Reinspections revealed that alterations had been carried out as directed and that pan cabinets were in conformity with the required standard.

Regular inspection of the sanitary conveniences of all native huts and dwellings ensured that although most did not contain regulation pan cabinets, all were maintained in a fly-proof condition.

Fly Control.—In the early part of the year trochus flies created a serious nuisance. A council by-law prohibiting the landing of trochus shell which had not been passed by inspection as thoroughly cleaned of all shell meat has since reduced the nuisance to a minimum. Regular supervision of trochus shell stores ensured that D.D.T. spraying was carried out effectively.

Mosquito Control.—Mosquito infestation on the island is seasonal in relation to the heavy rainfall between December and March. During this period the lowlying area near the waterworks was sprayed and control work exercised. Defective street drainage and channelling provide mosquito breeding grounds between intermittent rains at the end of the wet season. The council has lodged an application for loan and subsidy on an estimated cost of £2,000 for drainage works.

Water Treatment.—Solution feed appliances have been installed at the reservoir and reticulation tank for alum and chloride treatment respectively. A chlorotex reagent outfit is now employed for carrying out regular tests for residual chlorine.

Gastro Enteritis.—An outbreak of gastro-enteritis of approximately three weeks' duration was traced to contamination of the town water supply and twelve native huts (a possible cause of contamination) were demolished for re-erection on another part of the island. The sanitary convenience and fowl run of the water pumper's residence were also removed to another site as a precautionary measure.

Rat Control.—Seventeen pounds of zinc phosphide baits and 14 lb. of phosphorus (bread base) were laid during the year with marked success, although rats are still prevalent on the island.

Barber Shop.—The one barber shop in the town area was regularly inspected.

Native Quarters.—These were regularly inspected to ensure maintenance of satisfactory sanitation.

Licensing.—Reinspections of hotels were

carried out when it was found that alterations and repairs had been carried out as directed. Large-scale alterations were in some instances neglected due to the shortage of materials.

Immunisation.—An immunisation campaign was carried out and 108 children were immunised against diphtheria and 84 against whooping cough.

Summary.—Summary of inspections is as follows:—First inspections, 782; reinspections, 189; official calls, 145, total, 1,116.

HOOKWORM CAMPAIGN.

Microscopist-in-Charge, S. THOMPSON.

The Hookworm Control staff in North Queensland consists of the Microscopist-in-Charge, a field inspector, and two School Health Service nurses (the latter being on a part-time basis).

In July, 1948, the Ingham centre was closed and a new office is to be opened in Tully.

During the year, the sisters carried out general school (medical) inspections together with hookworm duties.

At the beginning of September, 1948, a house-to-house hookworm survey was commenced in the northern portion of the Mulgrave shire in the Cairns area. The shire was divided into six subareas—namely, Smithfield, Redlynch, Freshwater, Edmonton, Gordonvale, and Babinda. The first three subareas were completed by the end of May, and the Edmonton subarea is now being surveyed.

At the beginning of June it was decided to commence the examination of all displaced persons working in cane gangs. So far, of the 131 examined not one showed positive hookworm; 80 per cent. of those examined came from Poland where hookworm is not endemic. The examination of all cane gangs in the Cairns area will be continued until completed.

During the first few months of 1949 field work in the Cairns area has been carried out under difficulties owing to continuous wet weather. During this period intensive survey was carried out in the towns only.

Of the 3,288 specimens examined during the year under review, 250 showed positive hookworm results, 109 of the hookworm hosts have been treated to a cure. Also, 254 specimens contained ova of other parasitic worms—namely, *Oxyuris vermicularis*, *Trichuris trichiura*, *Hymenolepis nana* and *Ascaris lumbricoides*. Of the 670 school children examined in all areas, 15 were found positive for hookworm and 63 for other parasitic worms. Of these positive children 8 have been treated to a cure.

Arrangements were made with the Superintendent, Mona Mona Mission, for the 84 aborigines harbouring hookworms to be treated at the mission by the trained nurse who is employed there.

The aborigines in the Cairns area found positive for hookworm have all been treated. All aborigines in the Daintree area were mass treated at the mission. Arrangements were made with

the officer in charge of police, Mossman, and all aborigines in that area were mass treated by the microscopist at the police station.

In the Cairns area the field inspector has carried out a house-to-house survey, delivered all treatments, collected re-examination specimens, and made sanitary inspections.

All defective privies and homes without a sanitary convenience have been brought under the notice of the local authority inspector. The co-operation of this inspector has accounted for a considerable number of new privies and cabinets to be put in at the homes in this area.

A number of specimens have been received for examination from Mossman and Babinda hospitals, also from local practitioners in the Cairns area. It was necessary for 14 heavily-infested hookworm hosts to be treated in the Cairns, Mossman, Babinda, and Tully hospitals.

With the assistance of the Mulgrave shire inspector, the microscopist visited a home at Yorkey's Knob and spread lime on a portion of the back yard where infested hookworm faeces had been buried for past years, selected a new site for disposal of nightsoil, and instructed the person responsible for the burial of the nightsoil to wear shoes.

Lists of all sanitary inspections made by the field inspector were forwarded to Brisbane at the end of each month. Also, a list of all defective privies has been given to the local authority inspector who has issued notices to have them brought up to State Government regulations.

In all areas a close watch is being kept on the sanitation at the homes of positive hookworm hosts so as to prevent the spreading of hookworm disease.

During the absence of the microscopist on recreation leave the resident sister at Cairns carried out the duties in the office and laboratory.

Medical practitioners, school teachers, and the local health inspectors have given all possible assistance to the Hookworm campaign in helping to eradicate hookworm disease.

Hookworm disease is endemic in North Queensland, and only constant education of the public, together with proper facilities for diagnosis and treatment, will keep it at its present low incidence.

WEIL'S DISEASE CAMPAIGN.

NORTHERN CANE AREAS.

Inspector in Charge, J. M. KENNEDY.

GENERAL.

Active field work was carried on throughout the year in the following sugar mill areas:—South Johnstone, Goondi, Mourilyan, Mulgrave, Babinda, Tully, Victoria, Macknade, and Hambleton (part). In addition, as occasion required, attention was directed to Mossman mill area and to that section of the shire of Hinchinbrook supplying cane to the Haughton mill at Giru.

Heavy crops called for an early commencement of the 1948 harvest, but the improved labour position in field and factory, combined with good weather conditions after a tardy start, enabled all mills to complete crushing operations ahead of schedule. Only on the Herbert River, where exceptionally heavy crops were harvested, was crushing prolonged after Christmas.

Heavy rains with sodden fields until early July created special harvesting difficulties at all mills. Effective burning of cane before cutting could not be carried out in many blocks where, owing to early abnormal infestation by rodents, special risk attached. A shortage of poison baits, evident during the early months of 1948, had its effect later in the year and indeed marked rat infestation and damage was clearly manifest in early May even before crushing commenced.

From the month of August onwards weather conditions generally were very good. The ground dried out thoroughly during this period, permitting most effective burning of cane and consequently rapid harvesting of crops with, generally, ample and continuous supplies of cane to the rollers.

RODENT CONTROL.

Not all Pest Boards appreciated the need for greater vigilance and attention to rat control measures indicated by early field infestation. Delayed orders for poison baits could not be fulfilled in time by suppliers in the South owing to labour and material shortage resulting in heavy infestation by September.

It was noted that from this time onwards until cessation of harvesting even hard-rinded canes such as Trojan were heavily attacked by rats with consequent heavy economic loss in some localities.

It is clearly evident that in a year of heavy crops, with lodged cane and excessive weed growth, ample poison supplies properly distributed are essential if control over the rat population is to be maintained.

As baits became available distribution was made and in most mill areas blanket campaigns were conducted when harvesting ceased, with excellent results.

With the cutting out of farms in early November special attention was given by campaign officers to cleaning up activities. The destruction of rat harbourage by burning off, ploughing out, or by the application of poison spray was advocated with good results, while in several instances the fencing off of waste land adjacent to cane lands for use by stock was undertaken. Unfortunately, fencing materials are still in

short supply, preventing the expansion of this remedial and profitable method of rat control.

During the year invitations to address the members of a mill directorate and a growers' committee on rat control measures were accepted by the inspector in charge and it is believed that more effective co-operation between mill, Pest Board, and the campaign staff was thereby secured.

Zinc phosphide wheat baits continue in general use while supplies of thallium sulphate baits have again become available and were used extensively during the year.

Phosphorus paste on bread accounted for a goodly percentage of total baits used, being cheap and very effective under dry conditions.

The dipping of phosphorus baits in tallow (first noted at Hambleton mill some years ago) appears to maintain freshness over a period of several weeks, thus removing a main objection to the use of this type of bait. Distribution in this form on a fairly wide scale has been made in Mulgrave mill area over the last few months with reported excellent results.

Some field experiments with strychnine on cane and other mediums are now under way in Mourilyan area.

Figures showing number and type of rat poison baits distributed by the various Pest Boards over the twelve-monthly period are set out in Table XLIII. of this report.

All Local Authorities have distributed poison baits to householders and business premises within their areas as required and have given necessary attention to rubbish tips, river banks, and sections where infestation by rodents was likely or possible.

LEPTOSPIROSIS.

A small outbreak of Leptospirosis (Weil's Disease) occurred in the Innisfail district during the early weeks of the 1948 crushing. This coincided with the abnormal field conditions and heavy and continuous rainfall noted earlier in this report. Thirteen positive cases were recorded during this period, while only two more were notified from all areas during the remainder of the twelve-monthly period. All cases reported during the year, giving district and occupation, are shown in Table XLII.

SCRUB TYPHUS.

Nearly all cases of this disease occur outside the limits of the actual canegrowing areas. Follow-up and field investigation of all cases notified would indicate that infection can be acquired in scrub country, forest belts, or grasslands and that risk is confined to certain specific tracts of country.

Scrub typhus cases notified in Local Authority areas covering the coastal belt from Ingham to Mossman are set out in Table XLIV.

Full co-operation was received during the year from mill officials, growers' organisations, the A.W.U., and Pest Board officers,

TABLE XL.

Mill Area.				Total Area Harvested.	Total Crushed.	Total Burned.	Total Burned.	Burned under Health Regulations (including under 10 Tons P. Ac.)	
				Acres.	Tons.	Acres.	Tons.	Tons.	Acres.
Johnstone	..	..	..	10,751	266,836	10,488	260,314	18,040	635
Goondi	..	..	..	7,250	204,228	7,087	199,653	51,637	1,616
Mourilyan	..	..	..	8,110	182,528	8,000	180,320	7,500	320
Mulgrave	..	..	..	11,275	293,157	10,998	285,960	130,000	5,000
Babinda	..	..	..	10,767	238,415	10,372	228,524	74,070	3,366
Tully	..	..	..	12,339	267,594	12,070	261,917	43,508	2,005
Victoria	..	..	..	12,833	327,566	12,542	320,283	7,772	592
Macknade	..	..	..	11,353	296,221	11,220	292,910	35,647	1,802
Hambleton	..	..	..	8,762	244,449	8,407	234,114	26,552	1,211
Totals	..	..	..	93,440	2,320,994	91,184	2,263,995	394,726	16,547

TABLE XLI.

Mill Area.				Average Number of Cutters.	Number of Gangs.	Stand-over Cane.	Duration of Crushing.
						Acres.	Weeks.
Johnstone	..	..		350	62	26	28
Goondi	..	..		235	35	Nil	29
Mourilyan	..	..		270	50	Nil	24½
Mulgrave	..	..		385	110	Nil	27½
Babinda	..	..		330	100	12	28
Tully	..	..		360	65	72	28½
Victoria	..	..		340	62	Nil	32
Macknade	..	..		326	54	Nil	32
Hambleton	..	..		262	44	Nil	28
Totals	..	..		2,858	582	110	257-258

TABLE XLII.
LEPTOSPIROSIS CASES NOTIFIED.
DISTRIBUTION OCCUPATION AND NATIONALITY.

District.				Canecutters.	Timber.	Farmer.	Sugar Mill Worker.	British.	Displaced Person.	Southern European.
Innisfail	..	..		12	1	1	..	8	2	4
Tully	..	..		..	..	..	1	1	..	..
Ingham	..	..		..	..	..	..	..	..	..
Babinda	..	..		..	..	..	..	..	..	..
Gordonvale	..	..		..	..	..	..	..	..	..
Cairns	..	..		..	..	..	..	..	..	..
Mossman	..	..		..	..	..	..	..	..	..
Totals	..	..		12	1	1	1	9	2	4

TABLE XLIII.
BAITS DISTRIBUTED BY PEST BOARDS FOR RODENT DESTRUCTION.
NUMBERS AND TYPE.

Mill Area.						Phosphorus on Bread.	Thallium Sulphate. (Wheat.)	Zinc Phosphide. (Wheat.)	Other.
									Phosphorus. Lb.
Johnstone	..	..	..	..	..	..	..	1,000,000	12
Goondi	..	..	..	..	..	..	231,000	693,000	..
Mourilyan	..	..	..	..	..	5,000,000	600,000	..	..
Babinda	..	..	..	..	..	149,952	..	556,032	..
Mulgrave	..	..	..	..	..	316,800	161,810	235,730	..
Tully	..	..	..	..	..	..	450,000	..	..
Victoria	..	..	..	..	..	..	575,000	700,000	..
Macknade	..	..	..	..	..	..	1,000,000	794,816	..
Hambleton	..	..	..	..	..	..	..	664,576	..
Mossman	..	..	..	..	..	550,000	140,000	430,000	..
Totals	..	..	..	..	..	6,016,752	3,157,810	5,074,154	12

TABLE XLIV.
SCRUB TYPHUS CASES NOTIFIED BY LOCAL AUTHORITIES.
DISTRIBUTION AND OCCUPATION.

Shire.		Timber.	Local Authorities Employee.	Canecutters.	Farmers.	School.	Others.
Johnstone	..	1	..	1	1	..	..
Cardwell	..	2	..	..	1	1	..
Hinchinbrook	..	..	..	..	..	..	..
Mulgrave	..	3	2	1	..	..	6
Douglas	..	2	..	1	1	..	2
Cairns	..	..	..	..	..	..	..
Totals	..	8	2	3	3	1	8

SECTION OF INDUSTRIAL HYGIENE.

DOUGLAS GORDON, M.B., B.S. (Qld.), Medical Officer in Industrial Hygiene.

During the past year the following matters have had the attention of this section:—

(1) Reports submitted on industrial premises, industrial health hazards, or to a less extent on administrative matters 104

(2) Clinical reports to medical practitioners, the Insurance Commissioner, &c. 66

(3) Clinical examinations performed on patients 112

It is very satisfying to note that several of the reports submitted during this period con-

cerned chemical hazards yet to be introduced to industry in this State. In other words, prospective users of some new processes sought advice from this section before introducing substances which they suspected might be harmful to their employees. Such procedure allows the prevention of industrial disease to be exercised to its fullest extent and indicates a trust in this section which is gratifying. It is also pleasing to see the interest employers have in their employees' welfare.

TABLE XLV.
CASES SEEN FOR SOME SPECIAL REASON OTHER THAN FOR ROUTINE EXAMINATION.

—	Total.	Negative.	Positive.	Miscellaneous.
1. Patients Exposed to Dust—				
Coalminers	34	30	..	4 doubtful
Foundry workers*	33	29	1	3 declined X-Ray
Metal miners	2	..	2	..
Brickyards (dragging bricks)	6	5	..	1 declined X-Ray
Furnace cleaning and repairs	2	..	2	..
Sugar mills—megasse exposure	4	3	1	..
			(Not pneumonokoniosis. ? allergic rhinitis)	
Quarry workers	3	3	..	..
2. †Patients Exposed to Lead Substances—				
House-painters	10	8	1	1 doubtful
			(Transient)	
Plumbers	3	2	..	1 doubtful
Printing—				
Rotary machinist	1	1	..	..
Stereo casting	3	3	..	..
Letterpress machinist	1	1	..	..
Linotype operator	1	1	..	..
Compositor	2	2	..	..
Proof-reader	1	1	..	..
Lead-reclaiming (printery)	1	1	..	..
Battery reclaiming	5	1	4	..
Battery manufacture	1	1	..	..
Lead-light worker	2	2	..	..
Can making (solder)	1	1	..	..
Lead mining	2	2	..	..
Shipbuilding (welding on lead painted surface)	1	1	..	..
Scrap-metal merchant	1	1	..	..
Petrol blender	1	1	..	..
Lead burners	2	2	..	..
3. Rubber fumes (“turning down” rubber rollers in printing industry)	1	1	..	..
4. Grinding bronze	1	1	..	..
5. Carbon monoxide exposure	2	2	..	..
6. Acid exposure in “pickling of metals”	2	..	2	..
7. “Q” fever	3	2	1	..
8. Weil’s disease	1	..	1	..
9. Scrub typhus	4	..	4	..

* These foundry workers were not part of the general survey, but consisted of patients being reviewed or of men who had not been sufficiently long in the industry to qualify for the survey.

† Patients with lead exposure here listed do not include the routine monthly examinations carried out among those employed in the more dangerous lead trades. In routine examinations some 80-100 men are checked monthly and lead poisoning is prevented in this way for arrangements are made to have an employee moved away from lead exposure as soon as he shows the early signs of lead poisoning.

As well as the above clinical examinations were made—usually in company with Dr. G. Pasquarelli—of some twenty cases of dermatitis. The great majority of these conditions were in coalminers and usually were not directly associated with work. Two interesting cases of dermatitis due to the handling of organic mercurials for fungicidal purposes were reported from country centres. One of these arose when a lad mixing up the organic mercurial solution to treat cone sets apparently frequently handled the dry powder and the other occurred in a worker treating wheat seeds. Skin lesions from this cause may become a little more common in the next year or two as seed treatment becomes more popular with individual farmers, but no cases of serious trouble or systemic poisoning

should happen under such a set of circumstances. Another unusual case for these times was that of a worker exposed to acid fumes while pickling stainless steel beer barrels. He was found to have the typical textbook picture of teeth erosion on the exposed outer surfaces of his front teeth.

PNEUMONOKONIOSES.

Mention was made in last year’s report of the comparatively low incidence of pulmonary dust disease. Since then some further evidence which seems to corroborate this view has come to hand. The foundry survey has been completed and discussion of the results elsewhere in this report will show that for a variety of reasons the incidence of pneumonokoniosis in that industry

is not unduly high. In addition, the Insurance Commissioner has through Dr. D. W. Neville and other of his officers compiled some rather interesting figures concerning the incidence of claims for miners' phthisis in the mining industry.

The following is a precis of Dr. Neville's observations:—

Four hundred claims admitted to miners' phthisis benefit over the last fifteen years (approximately) were reviewed; these represented about 70 per cent of the total number of miners compensated for pneumokoniotic diseases in this period. The records of the remaining 30 per cent. were in other centres and therefore difficult to obtain. An arbitrary year, 1915, was taken by Dr. Neville, after consultation with officers of the Department of Mines, as marking the end of our intense goldmining era, and it also approximates to the beginning of modern mining history when dust suppression and good ventilation began to be introduced into some mines at least. In other words, a miner with an occupational history of some years prior to 1915 was most likely to have contracted his disease under the "bad old" conditions whereas those who had worked mainly subsequent to 1915 had a good chance of having been employed under better modern conditions. Practically without exception claims submitted prior to 1935 were found to be from men who had worked mainly prior to 1915, and in fact of the 400 claims admitted in the last fifteen years no less than 334 were found to be from men who had worked for more than five years prior to 1915 in mines. The remaining 66 patients were then divided up according to the radiological appearance of their chest films as follows:—

—	"A."	"B."	"C."	Total.
Coalminers	3	16 (1)	1	20
Metalliferous	17 (4)	6 (4)	9	32
Mixed mining history (Metal mining, quarrying, coalmining, &c.)	5 (1)	5 (3)	4	14

(Figures in brackets show those of the group who have superadded tuberculous infection).

Group "A" films show very definite nodular fibrosis.

Group "B" films show linear fibrosis regarded as due to pneumokoniosis.

Group "C" represents those with no radiological confirmation of pneumokoniosis. This group among the metalliferous miners included some claims made after death and claims from patients frankly tuberculous without an apparent pre-existing silicotic basis.

Group "C" is obviously such a "hotchpotch" entity that it would be difficult to include it in statistics one way or the other—leaving 52 cases of whom 19 are coalminers. In the latter group only one case had superadded tuberculosis, whereas of the remaining 33 cases, all of whom had had some contact with metalliferous mining, no less than 12 had pulmonary tuberculosis. (The value of these figures is somewhat lessened for we do not know the criteria used for diagnosing tuberculosis.) In the lastmentioned classes out of 33 no less than 29 either had nodular fibrosis

or tuberculosis and 4 only were diagnosed on "linear fibrosis" alone. Among the 19 coalminers, however, only 3 showed definite nodulation and a fourth was tuberculous, so that 15 were diagnosed on linear fibrosis only. In the case of these miners the diagnosis in most cases must have depended on clinical signs—i.e., those of emphysema.

The occupational histories of the 33 men under consideration were then studied by Mr. O. Carlson, of the Department of Mines, and the writer and where records did not extend sufficiently far into the past other sources were drawn on for information. Eventually only two men including quarrymen and sewer workers were found who did not have a history of substantial working in some example or another of the old dusty type of mine which had continued to remain in operation after 1915. The two men in question had commenced work in the twenties in a mine which has only recently closed down. Both were comparatively young when diagnosed and both suffered from tuberculosis (presumably added to a silicotic basis). Eyewitness accounts have since stated that in the twenties this mine was still very dusty and that the subsequent reformation did not take place until the thirties. From the records available, therefore, no man who has entered the mining industry since 1930 has been "dusted" and no man with an occupational history of quarrying or sewer construction only has been diagnosed as a silicotic. (Since these figures were compiled, however, Dr. Neville has shown the film and records of a man who has developed silicosis presumably from working in the vicinity of a quarry crushing plant.)

Some comment is needed on these records supplied by the Insurance Commissioner and his officers. They are not proof that modern metalliferous mining conditions will not cause silicosis but they are a comforting indication that this may be so. The point remains, however, that the main mines operating to-day have worked in their present form since the nineteen hundred and thirties only, so that unless their hazards were bad ones it is still rather early for cases to be appearing; it probably would take twenty years or so of exposure before a miner suffered sufficient disability to make him seek medical help. There is, of course, other reassuring evidence. The modern mining engineer and the modern mines Departmental inspector are very dust conscious. From eyewitness accounts we know that our metal mining conditions to-day are infinitely better than they were forty years ago. We know also that whenever we take haphazard dust counts to-day, on the whole very few harmful concentrations are found. However, it would be somewhat rash to feel perfectly safe in the matter of dust without regular routine radiological examinations of all the men at risk and without regular routine dust counts of all working places.

On the coalmining side 19 men whose mining history has been mainly subsequent to 1915 were admitted to compensation. The opinion is held that anyone who has entered the industry since about 1927 has not yet had time to show signs of the disease, so that these cases must be reckoned as a percentage of the recruits to underground workings between about 1912 and 1927. Only a very rough estimate can be made of the intake of men to the industry over this

period and since such an estimate must be based on several assumptions the approximate figure of 750 might easily be fallacious. On this basis the incidence would be about 4 per cent.—allowing for 30 per cent. of records being absent—a low incidence, but nevertheless unsatisfactory since hardly any cases at all should be allowed to occur. The diagnosis of pneumokoniosis is at times not easy and it would seem that where honest difference of medical opinion exists the Commisisoner usually gives the claimant the benefit of the doubt. This procedure may at times lead to lenience when compared with awards made in other countries, but where doubt exists it is a good principle to give the workman the benefit of it.

Random sampling of present conditions in coalmines at any rate usually does not reveal high concentrations of dust; this happy state, however, will not continue if mechanisation is introduced without concurrent application of adequate dust suppression measures.

Dr. W. D. Robson—the Canadian co-proponent with the late Dr. Denny of the use of aluminium powder in the prevention and treatment of silicosis—visited the more important metal mines of Queensland in June of this year. His opinion of dust conditions observed coincided rather closely with those held by officers of the Department of Mines and of this section. He was very definite however that men engaged in mining should be X-rayed regularly and that all mines should have their dust concentrations measured as a routine procedure at definite intervals, and in fact stated that without data from such procedures he could not express an opinion as to whether or not there was a need for aluminium in this State. He also queried whether the average general practitioner was sufficiently conversant with pulmonary dust disease to entrust its diagnosis to his care and suggested that all applicants for compensation for the pneumokonioses should appear before a medical board specially constituted for the purpose.

LEAD POISONING.

The incidence of plumbism on the whole has been low with the exception that cases still occur in the battery reclaiming industry. It has proved exceedingly difficult to persuade odd members of this trade to adequately set their houses in order and some of their employees are careless in the handling of lead and not always co-operative in routine medical examinations. The matter of specific regulations to cover the handling of lead substances had been under discussion for some time, but the matter had been shelved for some twelve months in the hope that improvement would be effected by co-operation and persuasion rather than by compulsion. However, there would seem to be in all walks of life the odd individual who is moved by coercion only. Reluctantly, therefore, during the year that has gone detailed and specific regulations covering the handling of lead substances were recommended for adoption under "*The Factories and Shops Acts, 1900 to 1945.*"

FOUNDRY SURVEY.

For a period of two years preceding December, 1948, a survey was made of employees of

Queensland foundries to determine the amount of silicosis present and at the same time dust counts and ventilation measurements were carried out in order to estimate present foundry conditions in regards to harmful dust. From Mossman to Dalby 76 foundries were discovered through the help of various employer and employee organisations and these foundries are scattered up and down the coastal margin of the State. Many of these shops carry on engineering activities as well as engaging in the making of castings. The total working population engaged in actual foundry work was found to be 1,118. This figure does not include clerical, managerial staffs or employees engaged in engineering, packing or sales activities. However, silicosis is a disease which takes a long time to develop, and it was decided to X-ray only those moulders who had been fourteen years in their trade and other foundry workers who had been four years in their class of work. The eligible population was reduced to 388, and of this number 359 were willing to undergo physical examination and X-ray. Thirteen were considered to have silicosis. The positive cases came mainly from casting dressers and furnacemen who regularly chipped slag and did brick repair work inside furnaces and/or converters. Moulding in this State would appear to be a relatively safe occupation, but there was some evidence to suggest that if a dresser continued at his occupation for more than twenty years—and few do this—he had a fair chance of becoming dusted. By and large, steel shops were more dangerous than foundries engaging in iron or non-ferrous casting, and other things being equal the larger the foundry the more likelihood there was of finding a positive case.

Dust counts in the main agreed with field impressions and radiological results. In only a minor number of foundries were hazardous concentrations of dust discovered and such situations tended to be in the larger foundries and in steel shops and particularly in casting dressing annexes. By and large, in most instances general housekeeping and dust control in these latter were poor.

In assessing the incidence of silicosis in this industry it must be remembered that prior to the survey some positive cases had already been discovered by Dr. E. J. Reye in 1945, so that the incidence is a little higher in reality than it would appear from this survey. To make our records comparable with those of a well-known American survey the number of positive cases have been expressed as a percentage of the total foundry working population—i.e., 13 positives in 1,118, i.e., 1.2 per cent. Greenburg in an extensive survey of foundries in New York State recorded a percentage of 2.7 per cent. positive silicotics. However, it cannot be too strongly stressed that with modern conditions of dust control no cases of silicosis should occur at all. In the report on this survey appropriate remedial measures have been suggested.

COASTAL FEVERS.

This section's interest in various coastal fevers arose first as the result of workers' compensation insurance claims in which the Medical Officer in Industrial Hygiene was asked to express an opinion. It was quickly obvious that while many patients suffered from clear-

cut disease entities, such as Weil's disease, scrub typhus, and murine typhus, and that laboratory agglutinations proved these diseases present, there were nevertheless some sufferers whose agglutination tests were negative—for a wide variety of the known disease possibilities. In most cases where the diagnosis was clear the cause was connected with occupation and the illness compensatable. Hence the interest of an industrial hygienist—and subsequently the medical officer in industrial hygiene took over supervision of the Weil's Disease Campaign.

These fevers in question occur mainly in a wet coastal strip from Mossman in the North down through Cairns, Gordonvale, Babinda, Innisfail, and Tully to Ingham in the South. The wet tableland country around Atherton also, of course, provides its quota of patients with acute febrile illnesses the cause of which is sometimes obscure. In a visit paid to these areas in June, 1948, it was rather evident that some medical practitioners in the area were concerned about the problem and were inclined to think that unknown disease entities existed in their areas and that the laboratory tests as present constituted did not include these unknown causes within the acute fever group. In order to discover in an approximate manner the extent of the problem—that is, the number of patients with acute fevers who were negative to all laboratory tests—it was decided to keep a record of all cases of pyrexia of unknown origin in the areas in question. The sources of information have been the Disease Notifications sent in by medical practitioners and the names of patients whose blood has been submitted for tests to the Commonwealth Health laboratories at Cairns and Townsville and to this Department's laboratory. As far as the latter is concerned such blood is tested for typhoid, paratyphoid, five strains of Weil's disease, "Q" fever, brucellosis, and the typhus group. If a medical practitioner has a patient with an acute fever due to an unknown cause and if he does not consider that indications exist either to notify it or to submit a sample of blood to one of the laboratories, then such a case will not appear on this list. Also, the records were commenced in some instances a few months after the current year had begun, so the figures recorded here cannot hope to be complete—in fact, it should be obvious that they are indications rather than complete records. It is also obvious that they would vary from centre to centre in that some medical men would tend to submit blood for tests in circumstances in which others would not do so.

Where possible an attempt has been made to discover the relevant occupational histories of all patients, the attributed place of infection, and the month of the year. This work is done by State health inspectors, Weil's disease inspectors, and Local Authority health inspectors. It

is hoped in the coming year to greatly expand the information obtained. Any discrepancies between tables recorded by Chief Inspector Weil's Disease Campaign and those in this report are apparent rather than real ones. Figures here are based on proven cases in hospital districts as distinct from Local Authority areas; notifications are based often on suspect as well as proven cases; a few proven cases are sometimes not notified. In other words, any differences are easily explained.

The following table gives us the proportion of cases of acute fever of unknown cause in which laboratory tests were negative:—

—	Total Suspects.	Positives.	Negatives.	Blood not Sub- mitted.
Leptospirosis (Weil's Disease— canefields types)	28	16*	10	2
Scrub Typhus ..	43	23	20	?
Murine Typhus ..	21	15	1	5
Leptospirosis (Pomona type)	1	1	..	..
? Recurrent Fever	2	..	2	..

* One of these was a case of Scrub Typhus.

The results would, it is thought, indicate that further investigation should be made of this problem. It is obviously impossible at this stage to make even the wildest guess as to what the explanation of these negative results may be. At all events, the problem of negative laboratory findings in patients suffering from acute fevers of unknown cause is not confined to our wet northern littoral. In perusing the records concerning this type of patient in Southern Queensland it was noticed that the following positive results had been found:—

Murine Typhus	16	Sporadic cases in the cities
Tick Typhus	1	
Leptospirosis (Pomona type)	5	Odd cases mainly in rural areas
Leptospirosis (Mitis type)	1	

(Owing to the fact that during a certain portion of this year materials were not available for testing suspected cases of "Q" fever no record has been included in this report of such cases.)

On the other hand, no less than 42 patients presumably suffering from undiagnosed fevers yielded blood samples negative for all laboratory tests. In other words, there would seem to be some indications for investigation of "negative" patients in this State and this research work will be undertaken by the Queensland Institute of Medical Research. Maybe in these cases laboratory procedures prove negative for the same reasons that a great proportion of other laboratory tests give negative findings—i.e., the determination of the clinician to cover all diagnostic boltholes; on the other hand, there may be some more complex cause or causes.

MOSSMAN.
SCRUB TYPHUS, total suspects 12.

" Positive " Cases.				" Negative " Cases.			
Scrub Typhus.				" Coastal Fever."		" Mossman Fever."	
Mossman ..	1	August ..	1	Rocky Point	1	Miallo ..	1
Mowbray ..	1	September ..	2	Daintree ..	1	Mossman ..	1
Miallo ..	2	October ..	1	Miallo ..	1		
Julatten ..	1	February ..	2	Mossman ..	1		
Daintree ..	1						
	6		6		4		2

It will be noted that the patients attributed the place of their infections to widely scattered points in the Mossman hospital area. Unfortu-

nately, the exact occupations and exact localities were not known for this area.

INGHAM.									
SCRUB TYPHUS.									
Positive.					Negative.				
Abergowrie—scrub worker	1	September ..	1	Unknown ..	2	February ..	2		
Unknown	1	July	1						
	2		2		2				2
	—		—		—				—

ATHERTON.									
MURINE TYPHUS.									
Addresses of patients :—					“ Negative ” Cases.				
Atherton	6	July	1						
Kairi	5	October	2						
Malanda	3	November	4						
Tolga	2	December	5	1	October	1			
Jaggan	1	January	4						
Mapee	1	February	3						
Peeramon	1	March	1						
Tomoulin	1								
	*20		20	1					1
	—		—	—					—

* No record of blood having been submitted from five of these cases ; the other fifteen were strongly positive.

SCRUB TYPHUS.		
Number of Suspected Cases.	“ Positive ” Cases.	“ Negative ” Cases.
2	Nil	2

PYREXIA OF UNKNOWN ORIGIN.

Recurrent fevers, 2. (Paul Bunnell test negative on one of these).
Both negative to all tests.

In July, 1948, a medical practitioner at Atherton reported a case of murine typhus in a man who had recently arrived from Toowoomba—an endemic focus of the disease—and stated that the infection had presumably been contracted in Toowoomba. In October three cases of fever occurred, in November four, December five, January four, February three, and March one. With one exception, sera from these patients whose blood was sampled gave positive agglutinations with *Proteus* OX19. All evidence pointed to an “epidemic” of murine typhus with the source of infection centred on the peanut depot at Atherton. It will be seen, however, that the addresses of the patients show quite a wide scatter around the Atherton district. However, without knowing the movements of the sufferers it is very difficult to say whether infected fleas were as widely spread, for many people converge on Atherton to work, particularly at the grain depots and at other harvesting tasks. It was thought, for instance, that empty used peanut bags returning from the silos to the farms may have carried infected fleas; as against this, however, a few patients came from non-peanut growing districts and no cases were reported from Mareeba, an area which grows quite a quantity of peanuts. Of course, in Mareeba the rat population may be relatively light compared to that found in the Atherton maizegrowing area. It was not known whether the “epidemic” ceased because of measures of prevention instituted at the peanut depot, whether in the rat population the disease had run its course, or whether climatological factors had come into operation.

THE INDUSTRIAL ACCIDENT—AN UNSOLVED PROBLEM.

While the industrial diseases which achieve some kind of notoriety in the public mind—the pneumokonioses and chronic chemical industrial poisonings—can be considered to be reasonably controlled or perhaps occurring in some instances so rarely that the sum effect can almost

be ignored, the same happy state cannot be claimed for efforts at accident prevention. The good work performed by the Chief Inspector of Machinery and Scaffolding is but one facet of the complex problem of the anti-accident campaign. In the industrial accident field regulation and compulsion can help only up to a point. The problems are personal ones and depend for their solution on the goodwill and co-operation of almost everyone in industry. This goodwill should be cultured by education of the young industrial population. Even then, owing to the natural heedlessness of many human beings, there would still be many accidents due to personal carelessness. In other spheres of accident prevention a start has already been made in our primary schools and preliminary steps are also now being taken to consider the teaching of industrial accident prevention in our technical colleges. The adult as well as the child mind, however, must be reached. This is an even more complex problem. It is to be hoped that all Departments and all people interested in the subject of accident prevention will eventually pool their resources. The individual employee has to be convinced that care and interest displayed by him will pay him dividends in good health and increased working time. This requires Health Education on a wide scale and of high order—involving the expenditure of a good deal of money in advertising and propaganda; this expenditure, however, would eventually be trifling compared with the total cost of the industrial accident. In accident prevention workmen have to be “sold” the idea of living every moment of their lives “safely”; in other words we hope to instil a habit just as a large manufacturer spends many thousands in advertising to make the use of his products a national habit. Educational advertisement on this scale might easily mean the expenditure of £50,000 annually—a very large sum of money, but not so large when compared with the moneys expended each year in workers’ compensation. Also, the indirect costs of industrial accidents

are said to equal the direct costs of compensation. Of even more importance would be the saving of life and limb and a great deal of human misery.

At all events, it is pleasant to learn that preliminary enquiries have been made on the subject of physically "reabling" or "rehabilitating" patients suffering from industrial accidents. The Insurance Commissioner is to be congratulated on such a step and it is hoped that in due course the results of his enquiries will prove sufficiently encouraging to warrant the trial of some form of routine rehabilitation for those receiving compensation for lengthy periods.

LIAISON.

This section depends on the co-operation of other divisions of this Department for its working facilities and staff and on officers of other Government Departments for the enforcement of its recommendations. Liaison with all concerned has been excellent—with the Department of Mines, with the Department of Labour and Industry, and with the State Government Insurance Office. Once again radiologists at the Brisbane General Hospital have assisted greatly by viewing all films; particular thanks in this regard are due to Dr. C. Uhr and Dr. K. Uhd.

LABORATORY OF MICROBIOLOGY AND
PATHOLOGY.

Director, J. I. TONGE, M.B., B.S. (Sydney); Deputy Director, M. J. J. O'REILLY, M.B., B.S.,
(Sydney); Senior Bacteriologist and Technical Supervisor, H. E. BROWN.

STAFF;

STATISTICAL SUMMARY;

LABORATORY—

(a) Structural Alterations;

(b) Equipment;

B.C.G. VACCINATION OF TUBERCULOSIS CON-
TACTS;

TESTING OF THE EFFICIENCY OF AUTOCLAVES
AND STERILIZERS;

THE MALE TOAD TEST FOR PREGNANCY;

LEPTOSPIROSIS;

VISCERAL GRANULOMATOUS LESIONS RESEMBL-
ING LYMPHOPATHIA VENEREUM HISTOLOGIC-
ALLY;

PUBLICATIONS.

STAFF.

Dr. M. J. J. O'Reilly commenced duty as
Deputy Director on 29th November, 1948.

STATISTICAL SUMMARY, 1948-49.

TABLE XLVI.

1. BACTERIOLOGY.

A. Specimens of Human Origin.

Specimens.	Mode of Examination.	Number.
Swabs—		
Throat	Culture	2,218
Nose	Direct Smear ..	41
Urethra		
Cervix	Culture	1,666
Bartholin's Gland..	Direct Smear ..	7,854
Anus		
Axilla	Culture	1
Vulva	Culture	1
Intestine (P.M.) ..	Culture	3
	Direct Smear ..	5
Abdomen (P.M.) ..	Culture	1
	Direct Smear ..	1
Wound (P.M.) ..	Culture	2
	Direct Smear ..	2
Blood	Culture	2
	Direct Smear ..	2
Skin Lesion	Culture	1
	Direct Smear ..	1
Ear	Culture	1
Sinus	Culture	1
	Direct Smear ..	1
Meninges	Culture	2
	Direct Smear ..	2
Small and Large Intestine	Culture	1
Pus	Culture	17
	Direct Smear ..	17
	Culture	10
Pleural Fluid	Microscopical ..	14
	Animal Inoculation	10
	Culture	34
Cerebrospinal Fluid ..	Microscopical ..	65
	Animal Inoculation	2
Carry forward		11,978

TABLE XLVI.—continued.

1. BACTERIOLOGY—continued.

A. Specimens of Human Origin—continued.

Specimens.	Mode of Examination.	Number.
	Brought forward	11,978
Seminal Fluid	Microscopical ..	3
Synovial Fluid	Culture	2
	Microscopical ..	2
	Direct Smear ..	2,528
Serous Exudate	Dark Ground Examination ..	29
	Culture	80
Sputum	Direct Smear ..	411
	Animal Inoculation	81
Blood	Culture	4
	Animal Inoculation	3
	Culture	210
Urine	Microscopical ..	876
	Animal Inoculation	9
Faeces	Culture	113
	Microscopical ..	2
	Culture	1
	Microscopical ..	5
Gastric Contents	Animal Inoculation	4
Spleen (P.M.)	Animal Inoculation	1
Liver (P.M.)	Animal Inoculation	1
Kidney (P.M.)	Animal Inoculation	1
Umbilical Tissue (P.M.)	Culture	1
		16,345

TABLE XLVII.

B. Foods and Waters.

Specimens.	Mode of Examination.	Number.
	Plate Count	204
Water	Culture	205
	Microscopical ..	1
Water Sludge	Microscopical ..	1
	Reductase Test ..	79
	Plate Count	130
Milk	Culture	218
	Direct Smear ..	1
	Animal Inoculation	1
Ice Cream	Plate Count	2
	Culture	2
Ice Cream Scoop Rinse	Plate Count	12
Water	Culture	12
Condensed Milk	Culture	2
Bread	Culture	3
Smoked Herrings ..	Culture	1
Oysters	Plate Count	12
	Culture	4
Corned Meat	Culture	1
Tinned Sausage	Culture	3
Meat Pie	Culture	1
Olives	Culture	2
Carrot Juice	Culture	1
Lemonade	Culture	1
Lime Flavour and Soda	Culture	1
Lemonade Cordial	Culture	1
Extract		
Crushed Pineapple ..	Culture	1
Pineapple Juice	Culture	2
Pineapple Cordial ..	Culture	1
		905

TABLE XLVIII
C. Various Materials.

Specimens.	Object of Examination.	Number.
Disinfectants ..	Rideal-Walker Co-efficient	12
Antiseptic	{ Rideal-Walker Co-efficient	6
	Germicidal Value	3
Soap	Germicidal Value	1
Bottles	Sterility	2
Anahaemin	Sterility	1
C.S.L. Pertussis Vaccine	Sterility	2
Diphtheria Toxoid ..	Sterility	2
Monacrin Sulphanilamide Powder	Presence of Micro-organisms	1
Culture	Identification of Organisms	1
Cotton-wool Swab ..	Presence of <i>Cl. tetani</i>	1
Ethicon Suture	Presence of <i>Cl. tetani</i>	1
Umbilical Ties	Presence of <i>Cl. tetani</i>	6
Umbilical Pads	Presence of <i>Cl. tetani</i>	2
Soil	Presence of <i>E. coli</i>	1
Stagnant Mine Water	Presence of Fungi	1
Scrapings from Pit Props	Presence of Fungi	2
Slime from Pit Props	Presence of Fungi	2
Fibre	Presence of Micro-organisms	1
Packets of Cigarettes	Presence of Yeasts and Moulds	2
Packets of Tobacco ..	Presence of Yeasts and Moulds	5
		55

TABLE XLIX.
2. SEROLOGY.

	Number.
Serum Agglutination Tests—	
<i>Eberthella typhosa</i> (H)	292
<i>Salmonella paratyphi</i> (H)	259
<i>Salmonella schottmülleri</i>	260
<i>Proteus</i> OX19	266
<i>Proteus</i> OXK	266
<i>Brucella abortus</i>	256
<i>Leptospira pomono</i>	259
<i>Leptospira australis</i> A	203
<i>Leptospira australis</i> B	203
<i>Leptospira mitis</i>	259
<i>Leptospira icterohaemorrhagiae</i>	259
<i>Rickettsia burneti</i>	63
Paul Bunnell Test	6
Complement Fixation Tests—	
Eagle Wassermann (Serum)—	
Routine	3,992
Quantitative	48
Eagle Wassermann (C.S.F.)	114
Gonococcal C.F.	1,968
Flocculation Tests—	
Kline	4,805
Kahn	200
Lange Colloidal Gold Reaction (C.S.F.)	110
<i>Salmonella</i> Culture (Typing)	1
	14,089

TABLE L.
3. BIOCHEMISTRY.

Specimen.	Examined for.	Number.
Whole Blood ..	Urea	85
	Sugar	9
	Chlorides	1
	Uric acid	15
	Cholesterol	5
	Calcium	1
	Hydrogen ion concentration	1
	Carried Forward	117

TABLE L—continued.
3. BIOCHEMISTRY—continued.

Specimen.	Examined for.	Number.
	Brought forward.	117
Plasma	Total Protein	84
	Chlorides	1
	Cholesterol	1
Serum	Bile (Van den Bergh and Fouchet)	1
	Calcium	2
	Protein	3
	Cholesterol	15
	Bilirubin	1
Cerebrospinal Fluid	Protein (Phillips)	75
	Globulin (Nonne-Apelt)	72
	Chloride (as NaCl)	68
	Sugar (Benedict)	66
Urine	Specific Gravity	12
	Albumin	967
	Sugar (Benedict)	948
	Acetone Bodies	3
	Urea	1
	Lactose	1
	Glucose	1
	Hydrogen ion concentration	719
	Bence Jones Protein	1
	Pigments (Spectroscopic)	1
Faeces	Total, Split and Unsplit	
	Fats	14
	Occult Blood	11
	Bile	1
Duodenal Fluid	Trypsin	6
Gastric Contents	Blood	1
Urinary Calculus	Chemical constitution	5
Biliary Calculus	Chemical constitution	1
Functional Tests	Glucose tolerance tests	4
	Urea clearance tests	25
	Urea concentration tests	18
	Fractional test meal	1
		3,247

TABLE LI.
4. HAEMATOLOGY.

	Number.
Cell Counts—	
Red Cells (Total)	1,317
Red Cells (Stippled)	915
Reticulocytes	6
White Cells (Total)	1,568
White Cells (Differential)	1,330
Platelet Count	8
Haemoglobin Estimations	1,682
Haematocrit	259
Sedimentation Rate	23
Coagulation Time	12
Bleeding Time	11
Prothrombin Time	1
Prothrombin Index	1
Retraction Time	1
Blood Grouping (A. B. O.)	205
Blood Typing (Rh)	205
	7,544

TABLE LII.
5. PARASITOLOGY.

Specimen.	Object of Examination.	Number.
Faeces	Amoebae (cysts and vegetative)	33
	Helminth ova	1,242
	Helminth adults	6
Pus	<i>Trichomonas vaginalis</i>	30
Blood	Microfilariae	3
	<i>Plasmodium</i> spp.	124
Arthropods	Identification	1
Helminths	Identification	7
Flock from Couch	Arthropods	1
		1,447

TABLE LIII.
6. VARIOUS TESTS.

	Number.
Mantoux Test	7
Aschheim Zondek Test (Pregnancy)	42
Male Toad Test (Pregnancy)	14
Virulence Test (<i>C. diphtheriae</i>)	45
Dust Counts	101
	209

TABLE LIV.
7. HISTOLOGY.

Tissues Sectioned.	Number.
Human—	
Biopsy	1,001
Post-mortem	579
Animal—	
Horse	2
	1,582

TABLE LV.
8. MEDICO-LEGAL.

Post-mortem Examinations	487
Clothing—	
Blood	6
Spermatozoa	38
Various Articles—	
Blood	7
Spermatozoa	5
Smears—	
Gonorrhoea	2
Spermatozoa	9
Organisms	1
Swabs—	
Gonorrhoea	1
Spermatozoa	3
Organisms	1
Hair—Identification	3
Scrapings—Blood	1
Blood—Grouping	4
Tissue—Examination	5
Bones—Identification	14
Boxes of Bones—Identification	2
	589

Attendances at Courts—	
Supreme Court	13
Police Court	10
Coroner's Court	11
Other Courts	3

TABLE LVI.
EXAMINATION OF RODENTS.

Rodents received for examination from Brisbane City Council:—	
Classification—	
<i>Rattus norvegicus</i>	8,692
<i>Rattus rattus</i>	46
Unclassified	4,636
<i>Mus musculus</i>	172
	13,546
Special Examinations for Plague—	
Rats fully dissected	3,144
Spleen smears examined	3,144

TABLE LVI—continued.
EXAMINATION OF RODENTS—continued.

Rat Smears Received from Other Centres—	
Mackay	1,110
Bundaberg	706
Maryborough	415
Gympie	69
Ipswich	539
Sandgate	736
Wynnum	662
Meatworks (Brisbane Area)	305
	4,542

No rat was found infected with *Pasteurella pestis*.

TABLE LVII.

10. VACCINES PREPARED.

A. Typhoid-Paratyphoid Vaccine—2,130 ccs. T.A.B. Vaccine were prepared.	
B. Autogenous Vaccines were prepared as follows:—	
From Pus	8
	8

11. MATERIAL SUPPLIED.

One hundred and eighty requisitions were supplied during the year to hospitals, private practitioners, and local authorities, consisting of 6,010 swabs, 5,090 cultures, 1,573 faeces tins, 1,272 Wright's capsules, 148 urine bottles, 30 glass slides, 50 C.S.F. bottles, 18 bottles of broth, 24 blood bottles.

TABLE LVIII.
CULTURE MEDIA PREPARED.

	Number.
Serum Cultures—	
Inspissated Serum Slopes	8,050
Nutrient Broth Cultures—	
Small tubes	500
5 cc. tubes	1,350
Large tubes	240
Nutrient Agar Cultures—	
Large slopes	552
Small slopes	725
Sugars—	
Lactose (20 per cent.)	50
Lactose	900
Glucose	300
Maltose	100
Sucrose	200
Inosite	150
Inulin	50
Mannite	100
Dulcite	100
Levulose	50
Salacine	50
Sorbite	50
Rhamnose	50
Xylose	50

Miscellaneous Tubes and Plates—	
Schuffner's medium for <i>Leptospira</i>	828
Fletcher's medium	100
Treble Lactose	875
Methyl-red medium	200
Voges-Proskauer	50
Cooked meat (large)	60
Cooked meat (small)	350
Starch medium	75
	16,155

TABLE LVIII—*continued*.CULTURE MEDIA PREPARED—*continued*.

Material in Bulk—	Litres.
Normal saline	4
Buffered saline	154
Sterile distilled water	35
Gonococcus sugars	5
Nutrient agar	20
Count agar	28
Endo's medium	12
Milk medium	12
Nutrient broth	19
Maltose agar	3
Glucose agar	1
Gonococcus media	38½
Miscellaneous stains	22½
Miscellaneous reagents	60
McConkey's broth	1

LABORATORY.

(a) *Structural Alterations*.—The subdivision of the main laboratory and reorganisation of the preparation and media rooms was completed early in the financial year. The alterations have proved completely satisfactory and have considerably improved the appearance of the laboratory. The additional bench space and sectionalisation thus provided have been appreciated by the staff. Of particular benefit has been the system of having all the heat producing units (autoclaves, still, hot air oven, &c.) enclosed in a separate room with adequate draught ventilation, as now both the preparation and media rooms are comparatively cool and workable during the summer months.

(b) *Equipment*.—Considerable technical difficulties have arisen with the establishment of fluorescent microscopy in the laboratory. For some months the unit was working fairly satisfactorily but at present the lamp is being rebuilt and rearranged to avoid overheating. It is hoped that the fluorescence microscopy will be a routine procedure in the near future. To date no degree of success has been attained with the examination of leprosy smears by fluorescence microscopy but further experimental work will need to be done in that direction.

B.C.G. VACCINATION OF TUBERCULOSIS CONTACTS.

A start has been made in the investigation of contacts with cases of tuberculosis. These contacts are referred to this laboratory by the welfare officer of the Department and by the metropolitan public hospitals. A Mantoux test is carried out on the contacts and then these tests are read. The position reactors are advised to have a chest X-ray, whilst the negative reactors to the Mantoux test are given B.C.G. vaccine. Although this investigation has only recently commenced the number of contacts reporting for examination is rapidly increasing and a big expansion in this field is expected during the next twelve months.

TESTING OF THE EFFICIENCY OF AUTOCLAVES AND STERILISERS.

As a result of the occurrence of various cases of post-operative and neonatal tetanus in Bris-

bane an investigation of the institutions concerned gave cause for doubt as to the efficiency of the sterilisers used in these hospitals. The particular instruments involved were the so-called "combined dressing and instrument steriliser." One of these instruments was obtained from the manufacturers and tested both bacteriologically and with maximum recording thermometers.

As a result of these investigations it was found that these combined dressing and instrument sterilisers were unsafe for the sterilising of any dressings, as they were incapable of attaining an adequate temperature. Following on these investigations their sale was not recommended in the State of Queensland by the Director-General of Health.

Subsequently investigations were made into the sterilising facilities of hospitals in the metropolitan area and much revealing data was assembled. In this work most valuable assistance was given by Dr. R. A. O'Brien and Mr. J. Callaghan, of the Queensland Institute of Medical Research, to both of whom this laboratory is considerably in debt. It is hoped that in the near future the laboratory will be able to undertake the testing of autoclaves whenever it is desired by outside hospitals and ultimately it would be highly desirable for a routine check to be carried out at regular intervals of all autoclaves in private and general hospitals throughout the State. The only really satisfactory way of ascertaining the efficiency of an autoclave is by means of a thermocouple, as by this means not only the precise temperature of any particular part but the time taken to attain effective sterilising temperatures can be estimated. At the present time a thermocouple is available in the laboratory but a new galvanometer has been ordered to provide more accuracy in temperature readings.

With Dr. O'Brien's technical advice and assistance much valuable information and experience has been gained in sterilisation procedures and in the design and use of autoclaves. A review of sterilisation procedures is being prepared and new and approved methods of sterilisation will be introduced into all hospitals in the near future. An interim report has been circulated to these institutions.

THE MALE TOAD TEST FOR PREGNANCY.

A new pregnancy test has recently been introduced. The test is based on the fact that the males of many batrachian species respond to the injection of pregnancy hormones by the production of spermatozoa which can be demonstrated in their urine. When the animals are kept apart from females, spermatozoa are never found in their urine except when under such hormonal stimulus.

The animal used in this laboratory is the giant American toad (*Bufo marinus* L.), which was introduced to North Queensland in 1935 for the purpose of controlling the "Greyback" cane beetle in sugarcane. A supply of male toads was obtained from Gordonvale through the courtesy of Mr. R. W. Mungomery, of the Bureau of Sugar Experiment Stations.

The test is performed by injecting 10 ccs. of urine into the subcutaneous lymph space of the toad and after an interval of about three hours withdrawing a drop of the toad's urine, which is examined microscopically for the presence of spermatozoa. This test has advantages of speed, simplicity, and economy over previously described tests and is at least as accurate.

At present the Aschheim Zondek test is being carried out in parallel with the above test on all specimens forwarded for pregnancy tests. To date coincident results have been obtained with all specimens except those collected during the last six or seven weeks of pregnancy.

7. LEPTOSPIROSIS.

During the months of March, April and May, 1949, sera from four patients from Kyogle, New South Wales, suffering from febrile illnesses were found to give a diagnostic titre for *Leptospira pomona*. Three of these are males and one a female, all of whom were living on farms and coming in contact with pigs. These cases are of particular interest as the previously reported southern limit of the endemic area for *Leptospira pomona* was at Burringbar, New South Wales.

In December, 1949, a positive titre for *Leptospira pomona* was also obtained from a male patient at Winton. The infection was traced to a waterhole in which the patient was swimming two weeks prior to the onset of his illness. Cattle and pigs were drinking at the waterhole at the time. This case is of importance, as it extends the endemic area for *Leptospira pomona* further west, the previous limit being a case at Dalby, diagnosed by this laboratory in February, 1948.

VISCERAL GRANULOMATOUS LESIONS RESEMBLING LYMPHOPATHIA VENEREUM HISTOLOGICALLY.

During the routine histological examination of biopsy and autopsy material two cases have been noted during the last year, each of which

presented granulomatous lesions with the characteristic histology of *lymphopathia venereum*. One case was an aboriginal boy, aged 17 years, from Atherton, the other a girl, aged 7 years, in both of whom death was sudden. In the latter case the visceral lesions were associated with widespread encephalitis.

It is regretted that in neither case was the unusual nature of the condition realised until the sections were examined—thus appropriate bacteriological investigations to determine the aetiological agent were not possible. A similar case was found by Dr. J. Inglis, of the Pathology Department of the University of Queensland. These cases are of considerable interest, as, either we are faced with another disease, the histology of which is identical with *lymphopathia venereum*, or else lymphopathia venereum is far more common in this country than Australian reports would lead us to believe. It is hoped to publish these cases so that pathologists should be on the alert for similar lesions and every opportunity taken to determine bacteriologically their true aetiology.

PUBLICATIONS.

- Tonge, J. I.: "Aneurysms of the Splenic Artery with a Report of Two Cases and Review of the Literature," Medical Journal of Australia, July, 31st, 1948, page 119.
- Derrick, E. H.: "A Fatal Case of Generalised Amoebiasis due to a Protozoon Closely Resembling, if not identical with, *Iodamoeba bütschlii*," Transactions of the Royal Society of Tropical Medicine and Hygiene, Volume 42, September, 1948, page 191.
- Johnson, D. W., and Derrick, E. H.: "Histoplasmosis: Report of an Australian Case," Medical Journal of Australia, October 30th, 1948, page 518.
- Tonge, J. I., and Wannan, J. S.: "The Post-mortem Blood Sugar," Medical Journal of Australia, April 2nd, 1949, page 439.
- Johnson, D. W.: "The Epidemiology of Leptospirosis in the South-West Pacific Area," Read at the Seventh Pacific Science Congress, New Zealand, 1949.
- Derrick, E. H., and Brown, H. E.: "Isolation of the Karp Strain of *R. tsutsugamushi*," Lancet (in the Press).

GOVERNMENT CHEMICAL LABORATORY.

S. B. WATKINS, M.Sc., F.A.C.I., Government Analyst and Chief Inspector of Explosives;
A. S. HURWOOD, B.Sc., A.A.C.I., A.R.I.C., Deputy Government Analyst and Inspector of Explosives.

The outstanding achievement of the year was the establishment of a new record covering the number of samples examined during any one year of the laboratory's activities. The following table details for the years cited previous records since the laboratory passed the 10,000 mark in 1932-1933:—

Years.	Average Number of Specimens per Annum.	Percentage Variation Around 1934-38 Figures.
1934-38	13,660	..
1939-43	12,527	-8.3
1944-48	13,575	-0.6
1948-49	17,564	+28.6

The yearly variation over the past fourteen years is shown on the accompanying graph. The considerable trough for the years 1942 and 1943 was due to the impact of the earlier years of the War in the Pacific. This was followed by successive increases for the years ended 30th June, 1944, and 1945, when the laboratory became closely associated with the activities of the Commonwealth Food Control Organisation established for the purpose of organising and effecting food supplies for the Australian and American War Services. In 1943-1944 the number of samples submitted by the Commonwealth services was 3,877, and for 1944-45 the corresponding number was 4,460. The present record has resulted from no unusual circumstances, and is a reflex of the present demands made upon the laboratory by the many parties who seek its services. The laboratory provides an up-to-date chemical service for many departments of the State Government, several departments of the Commonwealth Service in Queensland, some semi-governmental organisations, including Local Authorities, and Hospital Boards and the medical profession. A large proportion of the activities of the laboratory, undertaking as it does a preponderance of chemical assessments, must of necessity be routine; however analysts should not be regarded as automatons—they are officers trained to an appreciation of their professional responsibilities and able to exercise initiative in the varied problems which do arise even in the case of what is often referred to as "soul-destroying routine." Many problems associated with the work of

the laboratory demand more than the limited examination which perforce must be given to them, and their further elucidation would, if staff were available, lighten routine and add savour to the work. As it is, the present staff is overtaxed, is unable to devote time to planned investigations and to studying chemical periodicals and publications in order to keep pace with the fast-moving train of events in the chemical world. Trained personnel is not available at present but it is anticipated that in the near future there will be a wider field from the ranks of which can be selected qualified officers to bring the present analytical staff up to strength in order to overcome the lag in certain sections and to meet the expected increase in work in other sections.

The output of work reflects high credit on the members of the analytical staff, who have willingly responded to the heavy pressure. That such a volume of work can be covered is in part due to the excellent appointments whereby fixed pieces of apparatus permanently set up can be put to use at short notice. Initially greater capital expenditure is involved, but this is compensated for by the increased individual output per officer which to-day is the highest on record. Nevertheless, present facilities are becoming inadequate to cope with the increasing volume of work. The crushing and grinding equipment is still housed in the Executive Building and much time is taken up by the frequent visits required for the preparation of samples for assaying. A detached testing room specially equipped for the examination of explosives, and a single workshop to accommodate effectively the mechanic's equipment, now housed in two inadequate rooms, are urgent necessities. Plans are being prepared to cover a new annexe in which it is proposed to centralise these and other activities.

No diminution in the demands made upon the laboratory is envisaged—in fact, everything points to the reverse, because of developments taking place throughout the State, and the rapid increase in population and civic areas.

Staff.—In addition to the Government Analyst and Deputy Government Analyst, the effective professional staff comprises 3 senior analysts, Division I.; 2 senior analysts, Division II.; 7

analysts, 2 assistants to analysts, and one cadet. The office staff includes 1 senior clerk, 1 junior clerk, and a clerk-typist, whilst a laboratory mechanic, a furnace room attendant, and four male attendants are attached to the laboratory.

Mr. K. H. Deasy, B.Sc. (assistant to analysts), resigned in January to join the staff of the Department of Chemistry, University of Queensland, and Mr. R. Lukey, B.Sc., was appointed analyst. Mr. K. A. Glover (assistant to analysts) continues on leave whilst attending the University of Queensland under the Commonwealth Rehabilitation Department.

Service.—Early in the present year the laboratory accepted responsibility for the examination of all dairy produce intended for export from Queensland under the Export (Dairy Produce) Regulations of the Commonwealth Department of Commerce and Agriculture. The laboratory already undertakes the examination of all other export commodities for this Department, and has through the years provided service for the Commonwealth Department of Trade and Customs.

The following table discloses the number of samples examined for the respective departments or other parties:—

A. State—				
Health and Home Affairs	5,349			
Police	262			
Geological Survey	558			
Mines Department	65			
Machinery and Scaffolding	10			
Irrigation and Water Supply	727			
Portmaster (Explosives)	1,869			
Local Government	117			
Main Roads Commission	381			
State Stores	201			
Queensland Government Railways	26			
Public Works	278			
Others	66			
B. Commonwealth—				
Trade and Customs	5,623			
Commerce and Agriculture	1,115			
Others	92			
C. Miscellaneous—				
Brisbane and South Coast and other Hospital Boards	132			
Medical Profession	120			
Public	593			
Total	17,584			

SECTION 1.

FOOD AND DRUGS.

Staff.—A. S. Hurwood, B.Sc., A.R.I.C., A.A.C.I., Deputy Government Analyst, Officer in Charge; R. S. Potter, A.A.C.I., Analyst; H. G. Dunstan, B.Sc., A.A.C.I., Analyst; G. Lahey, M.Sc., A.A.C.I., Analyst; R. C. Lukey, B.Sc., Analyst (5 months); K. H. Deasy, B.Sc., Assistant to Analysts (8 months); K. A. Glover, Assistant to Analysts (on leave).

The samples examined by the section showed an increase of 319 samples on last year's figures, and the number and source of the samples were as follows:—

Department.	Number of Samples.
Health and Home Affairs	4,698
Other State Departments	50
Commerce and Agriculture (Commonwealth)	1,115
Other Commonwealth Departments	19
Public	69
Total	5,951

TABLE LIX.
SUMMARY OF SAMPLES EXAMINED FOR THE
DEPARTMENT OF HEALTH AND HOME AFFAIRS.

Nature of Sample.	Number of Samples.	Passed.	Failed.
Beverage or cordial	151	98	53
Bread	190	161	29
Cereal	128	79	49
Condiment	79	25	54
Cosmetic	18	12	6
Crayon	97	97	Nil
Disinfectant	58	44	14
Drug or medicine	164	118	46
Essence	40	25	15
Fruit or fruit juice	45	36	9
Jam or jelly	24	17	7
Meat	11	8	3
Vegetable	12	8	4
Milk	2,766	2,274	492
Milk product	22	16	6
Paint	212	101	111
Spirituos liquor	62	41	21
Tobacco	186	106	80
Toy	68	43	25
Miscellaneous	365	194	171
	4,698	3,503	1,195

Those samples classed as failed include samples not conforming with prescribed standards and samples falsely described and incorrectly labelled.

The miscellaneous samples include fireworks, washing powder, molasses, food colour, confectionery, flock, gelatine, and gas mask.

TABLE LX.
DETAILS OF LEGAL SAMPLES TAKEN BY INSPECTORS IN
ACCORDANCE WITH THE PROVISIONS OF "THE HEALTH
ACTS, 1937 TO 1948."

Nature of Sample.	Number Examined.	Passed.	Failed.
Milk	2,476	2,025	451
Paint	96	51	45
Spirituos liquor	23	4	19
Bread	14	10	4
Summer drink	13	7	6
Flour	7	7	Nil
Cordial	5	Nil	5
Disinfectant	4	Nil	4
Miscellaneous	9	1	8
	2,647	2,105	542

TABLE LXI.
DETAILS OF LEGAL SAMPLES OF MILK.

Place.	Number of Samples.	Passed the Standard.	Below the Standard in Fat.	Below the Standard in Total Solids and/or Solids not Fat.	Number of Watered Samples.	Proportion of Watered Samples. Per Cent.	Average Proportion of Added Water. Per Cent.
Greater Brisbane	1,221	1,061	107	32	21	2	8·7
Beaudesert	61	58	1	..	2	3	10·0
Beenleigh	1	..	1	..	..	..	..
Bowen	7	2	..	..	5	71	22·9
Bundaberg	15	12	..	..	3	20	10·7
Caboolture	122	89	8	10	15	12	5·5
Cairns	38	32	6	..	..	..	..
Charleville	4	3	1	..	..	..	..
Charters Towers	11	4	3	..	4	36	9·0
Cleveland	13	11	..	2	..	..	..
Dalby	7	3	3	1	..	..	..
Dayboro'	42	37	2	3	..	..	..
Emerald	4	3	..	..	1	25	13·0
Gladstone	9	9	..	..	..	..	..
Goondiwindi	7	5	2	..	..	..	..
Gympie	16	11	..	..	5	31	20·2
Ipswich	190	155	15	14	6	3	5·9
Kingaroy	6	6	..	..	..	..	..
Mackay	9	9	..	..	..	..	..
Maryborough	46	31	9	2	4	9	3·4
Merrimac	28	24	2	2	..	..	..
Mitchell	3	1	2	..	..	..	..
Monto	4	4	..	..	..	..	..
Nambour	92	70	5	6	11	12	19·2
North Coast	27	22	4	..	1	4	6·5
Proserpine	4	..	..	..	4	100	5·3
Redcliffe	91	56	14	20	1	1	2·0
Rockhampton	127	92	21	2	12	9	7·8
Roma	13	9	4	..	..	..	..
South Coast	88	80	5	1	2	2	7·0
Stanthorpe	4	2	1	1	..	..	..
Tamborine	8	8	..	..	..	..	..
Toowoomba	86	74	8	1	3	3	7·5
Townsville	14	11	3	..	..	..	..
Warwick	14	12	2	..	..	..	..
Woodford	44	35	3	1	5	11	5·3
	2,476	2,041	232	98	105	4·2	9·9

TABLE LXII.
SUMMARY OF TABLE LXI.

	Percentage of Total Samples.
Adulterated with water	4.25
Deficiency in fat only	9.40
Below the standard in total solids and/or solids not fat	3.95
Passed the standard	82.40
	100.00

TABLE LXIII.
SAMPLES TAKEN IN GREATER BRISBANE.

Year.	Number of Samples.	Proportion of Total Milk Samples.	Proportion Adulterated with Water.
		Per cent.	Per cent.
1944-45	1,666	79.4	2.9
1945-46	1,411	66.7	1.1
1946-47	1,358	62.7	2.2
1947-48	1,261	55.2	1.6
1948-49	1,221	49.3	1.7

TABLE LXIV.
SHOWING THE AVERAGE FAT CONTENT OF THE LEGAL SAMPLES OF MILK IN WINTER AND SUMMER IN TOWN AND COUNTRY.

Number of Samples.	Greater Brisbane or Country.	Season.	Months.	Average Fat Content.
				Per cent.
2,476	Both	Overall	January-December	3.95
606	Brisbane	Summer	October-March	3.84
558	Country	ditto	ditto	3.81
1,164	Both	ditto	ditto	3.82
395	Brisbane	Winter	July-September	3.78
279	Country	ditto	ditto	3.80
674	Both	ditto	ditto	3.79
220	Brisbane	ditto	April-June	4.22
418	Country	ditto	ditto	4.42
638	Both	ditto	ditto	4.35

TABLE LXV.
MILK POSITION COMPARED WITH PREVIOUS YEARS.

Year.	Number of Legal Samples.	Deficiency in fat.	Below the standard in total solids and/or solids not fat.	Watered Samples.	Added Water. (average.)
		Per cent.	Per cent.	Per cent.	Per cent.
1942-43	1,950	1.9	10.5	3.5	11.0
1943-44	2,005	2.7	14.0	4.4	11.0
1944-45	2,099	3.7	12.4	4.5	12.0
1945-46	2,116	3.2	11.7	4.0	8.0
1946-47	2,166	2.4	17.7	4.4	10.0
1947-48	2,283	1.8	7.4	2.5	10.0
1948-49	2,476	9.4	4.0	4.3	10.0

Milk.

The various brands of pasteurised milk were regularly examined with satisfactory results, and the milk as a whole was of good quality, with an average fat content of 3.5 per cent.

There were fewer complaints than last year of dirty milk bottles.

The following observations are made from a survey of Tables LXI., LXII., LXIII., LXIV., and LXV.:—

The number of official milk samples examined was 2,476, a record for recent years.

Of these milks, 49.3 per cent. were obtained from the Greater Brisbane area and 50.7 per cent. from the rest of Queensland.

The proportion of milks adulterated with water was 1.7 per cent. in the Greater Brisbane area and 6.7 per cent. outside this area. As with the last two years, no watered milks were obtained from Cairns or Townsville.

The proportion of watered milks in the Greater Brisbane area (1.7 per cent.) was almost the same as last year (1.6 per cent.).

The proportion of watered milks outside the Greater Brisbane area (6.7 per cent.) was much higher than last year (3.6 per cent.).

Owing to exceptionally good seasons, the

proportion of naturally poor milk (4.0 per cent.) was about the lowest on record.

The overall proportion (4.2 per cent.) of watered milks was much higher than last year (2.5 per cent.) but about the average for previous years.

The average fat content of the milks examined was 3.95 per cent., as against 3.98 per cent. last year, and there was practically no difference in the average fat content of town and country milk.

The proportion of milks deficient in fat (9.4 per cent.) was the highest recorded for many years, in striking contrast to the low figure obtained last year (1.8 per cent.).

Lead Content of Milk from Mt. Isa.

Investigating the possibility of lead in milk from Mt. Isa, a number of samples of cow's milk from this centre was examined. No lead was detected in any of the samples. River water from the same district contained lead at the rate of 0.01 milligram to the litre, or considerably less than the maximum proportion (0.1 mgm. per litre) accepted in potable water.

Cream Substitutes.

Two preparations on the market used in place of cream were examined. They were essentially

wholesome emulsions of hydrogenated coconut oil and skimmed milk and contained on an average 30 per cent. of vegetable fat.

Bread.

In a white-bread survey of the Brisbane area in September, 1948, samples of bread from 59 different bakehouses were examined with the following results:—

Quality—

Good quality	3 equivalent to	5 per cent.
Fair average quality	44 equivalent to	75 per cent.
Poor quality	12 equivalent to	20 per cent.
	59 equivalent to	100 per cent.

Weight.—Of the 59 samples, 33 were short weight in proportions varying from 0.8 to 9.0 per cent., the average deficiency in weight being 3.0 per cent., or approximately 1.0 oz. to the 2-lb. loaf.

Water Content.—Fifty-five of the samples conformed with the prescribed standard in water content, containing less than 45 per cent. water in any part of the loaf. The remaining 4 samples contained up to 1.0 per cent. water in excess of this prescribed maximum.

A second survey of white bread in the Brisbane area was made during March and April, 1949, when the bread from 56 different bakehouses was examined with results as follows:—

Quality—

Good quality	5 equivalent to	9 per cent.
Fair average quality	25 equivalent to	45 per cent.
Poor quality	26 equivalent to	46 per cent.
	56 equivalent to	100 per cent.

Weight.—Of the 56 samples examined, 33 were short weight in proportions varying from 1.5 per cent. to 11.0 per cent., with an average deficiency of approximately 4 per cent. or 1½ ounces to the 2-lb. loaf.

Water Content.—Fifty of the 56 samples conformed with the prescribed standard of not more than 45 per cent. water in any part of the loaf. Six samples contained up to one per cent. in excess of this figure.

The proportion of poor quality bread was much higher in the second survey than in the first.

White-bread surveys were also made in the Toowoomba, Cairns, and Caboolture areas.

Of the 28 samples of wholemeal bread and brown bread examined 10 samples contained less than the prescribed proportions of wholemeal.

Flour.

The white flours from the several mills in Brisbane were examined regularly, and apart from two samples exceeding the nitrite limit of 2½ parts per million, they were of good quality and conformed with the prescribed standard for flour.

The wet gluten content averaged 35 per cent. and showed little variation from this figure throughout the year.

Meat.

A few samples of canned meat only were examined over the period under review.

Leather Beetle in Dried Fish.

A sample of dried fish from Cairns showed extensive spoilage through insect attack. The insect was identified as *Dermestes maculatus*, commonly known as the leather beetle or the hide and skin beetle. This pest bores into almost any compact mass near at hand and feeds on a wide variety of high protein materials. Although common in Queensland, it is not a serious pest to foodstuffs in this State.

Jelly Crystals.

A number of different brands of jelly crystals was examined. All conformed with the prescribed standard but several failed on labelling requirements. Some manufacturers still persist in labelling their product "Fruit Jelly Crystals" despite the fact that the only semblance of fruit present is a few drops of a fruit essence flavouring to the packet. Such a description is incorrect and misleading and a contravention of the labelling requirements. The food value of jelly crystals is not great and is essentially that of the sugar present. The small proportion of fruit flavouring present, whether synthetic or natural, adds nothing to the food value of the product.

Jam.

Most of the jams examined were of good quality and conformed with official requirements. Two different brands of fig jam contained artificial colouring (coal tar dye) in contravention of the regulations.

Tomato Sauce.

Fifteen brands of tomato sauce were examined with results as shown in Table LXVI.

Preservative (benzoic acid) was present in only two of the samples and artificial colouring (coal tar dye) in only three of the fifteen brands examined.

TABLE LXVI.

COMPOSITION OF TOMATO SAUCE.
(15 Samples Examined.)

	Maxi- mum. Per cent.	Mini- mum. Per cent.	Mean. Per cent.
Total solids	37.8	23.2	30.6
Acidity (acetic acid) ..	1.5	0.7	1.2
Reducing sugar	25.3	11.0	16.0
Sucrose (cane sugar) ..	11.5	1.0	7.2
Ash	4.0	2.2	3.3
Common salt	3.3	1.9	2.6
Non-sugar tomato solids ..	5.7	2.7	4.0

Flavouring Essences.

A number of food flavouring essences were examined and the majority were of good quality.

Several were not labelled in accordance with the Regulations. The commonest labelling fault was the use of the word "Pure" on the labels of essences containing artificial colouring. This is a contravention of a Regulation that is rigidly enforced. No foodstuff can be regarded as pure that contains either preservative or artificial colouring.

Lead Ingot in Cask of Wine.

Following an accident on unloading at a wharf, a 56-lb. ingot of lead crashed into a 63-gallon cask of wine, remaining in contact with the wine for two hours. A sample of the wine was submitted for examination as to lead content.

It contained lead at the rate of 0.5 parts per million, which was of little significance as far as metallic contamination of the wine was concerned.

Honey.

The purity of local honey came under review during the year and a number of different brands were examined. All were genuine and of good quality, and no evidence was found of the presence of commercial invert sugar or of any other foreign substance.

Fruit and Vegetables.

Judged from the absence of samples, the position relative to spray residues on fruit and vegetables would appear satisfactory. The appearance at times of some farms around Brisbane, however, would suggest the excessive use of insecticidal sprays on cabbages and cauliflowers. The latest literature from overseas would indicate that D.D.T. is more toxic than at first thought and that its presence in any quantity on foodstuffs constitutes a definite health hazard.

It would appear advisable to stop the spraying with DDT of cabbages and other plants of the *Brassica* family after the stage of growth has been reached when the leaves attain an incurved shape, indicating the first stage of heart formation.

Vitamin C in Queensland Pineapples.

The following observations on the ascorbic acid (vitamin C) content of pineapple juice have been made as a result of the examination of many hundreds of samples of genuine pineapple juice examined in this laboratory.

The vitamin C content of pineapple juice varies greatly with the size and variety of fruit and with the degree of ripeness and freedom from disease of the pineapple.

The ascorbic acid content is higher near the skin than near the core. Frostbitten pines are low in ascorbic acid, the juice from the skin having a lower figure than the juice from the rest of the fruit. In pineapples lightly affected with black-heart disease, the ascorbic acid content of the skin juice is only slightly reduced, whereas in the rest of the fruit it is markedly affected. In severe cases of black heart the pineapple does not contain any ascorbic acid.

In normal healthy pineapples the ascorbic acid content varies with the variety and size of the fruit. The lowest figure is obtained on the large smoothleaf pineapple and the highest in the small roughleaf variety.

In pines ripening in winter months the ascorbic acid content of the juice on an average is higher than the pines ripening in summer months. The results outlined in Table LXVII. summarise the figures obtained from the juice of normal pineapples.

TABLE LXVII.
AVERAGE ASCORBIC ACID (VITAMIN C) CONTENT OF THE JUICE FROM QUEENSLAND PINEAPPLES.

Variety.	Size of Fruit.	Ascorbic Acid.	
		(Mgm. per 100 mils.)	
		Peelings.	Edible Portion.
Smooth Leaf ..	Large ..	19	14
Ripley Queen ..	Average ..	49	42
Rough Leaf ..	Average ..	46	38
Rough Leaf ..	Small ..	53	45

Absence of Anti-oxidants in Edible Fats.

Samples of margarine and other edible fats were examined for the presence of hydroquinone and other chemical anti-oxidant substances with negative results.

There were several enquiries during the year as to the official attitude regarding the use of these anti-oxidant substances.

Under present legislation their use in food-stuffs is not permitted. Some of the commonly recognised chemical anti-oxidants would appear harmless in the proportions recommended for use, but others like hydroquinone are definitely toxic and it remains to be shown whether the continued consumption of such toxic substances in small amounts in foods is safe.

Organic Fungicides in Wood Intended for Use in Food Packing Cases.

Work is in progress in conjunction with Forestry Research Officers in connection with taint in foodstuffs stored in cases treated with the following organic fungicides:—

- Sodium pentachlorophenate.
- Sodium salicylanilide.
- Bis (5-chloro-2-hydroxyphenol methane) (D.D.M.).

Paint and Paint Scrapings.

Of the 212 samples of paint and paint scrapings analysed, 111 samples contained more than the prescribed limit of 5 per cent. soluble lead. Many of the samples were from old homes painted prior to the restriction on the use of lead paint.

Most of the new paints submitted conformed with requirements.

Toys.

Out of a miscellaneous collection 25 out of the 68 toys submitted contained lead or lead compounds either on the painted surface or in the toy substance.

The presence of lead in any form and in any quantity is prohibited in toys.

Crayons.

The position relative to lead in crayons was satisfactory. Of 97 samples examined all were free of lead.

Refrigerator Trays and Shelves.

Following a report on the cadmium coating of refrigerator shelves some trays and shelves

of home refrigerators were examined for this metal with negative results. The trays examined were composed of aluminium and the shelves of tinned steel. Cadmium is unsuitable for use as a coating on metal surfaces likely to come in contact with foodstuffs.

Cases are on record of serious poisoning from cadmium dissolved in fruit juices after brief contact with containers coated with the metal.

Hair-Waving Preparations.

During the past year home-waving preparations for cold permanent waving of the hair have acquired great popularity and a number of such preparations was examined.

There would appear to be little difference in composition between the home-wave preparation and the preparation used in beauty shops. The solutions contain ammonium thioglycolate in a concentration corresponding to about 5 to 6 per cent. thioglycolic acid with sufficient excess ammonia to bring the pH to 9.0-9.5, the optimum recommended in the cold-wave process. The action of the waving solution on the hair is arrested by neutralisers which may contain weak acids such as citric or tartaric acids, surface-active (wetting) agents, and also an oxidising agent such as hydrogen peroxide or potassium bromate.

Sollman in his Manual of Pharmacology states that as regards solutions of thioglycolic acid used in cold-wave hair treatment:—

“Some persons appear to have or develop allergic susceptibility with rashes of skin and mucosae. Severe cases may involve the blood count and liver function.”

Except in the case of sensitive individuals, however, the judicious use of these solutions should prove a relatively innocuous procedure.

Washing Powders.

Following a number of complaints of washing powders causing skin rash, the four commonest washing powders on the market were examined with results as shown in Table LXVIII.

TABLE LXVIII.
COMPOSITION OF SOME COMMON WASHING POWDERS.

	No. 1.	No. 2.	No. 3.	No. 4.
	Per cent.	Per cent.	Per cent.	Per cent.
Soap (dry)	50.4	53.7	34.4	18.3
Sodium Carbonate (Na ₂ CO ₃)	21.8	16.4	31.0	20.5
Sodium Bicarbonate	Nil	Nil	Nil	36.5
Borax	Nil	Nil	2.8	7.0
Sodium Perborate	Nil	Nil	4.8	Nil
Sodium Phosphate	Nil	Nil	Nil	1.6
Free Caustic Alkali	Nil	Nil	Nil	Nil
Water	27.8	29.9	27.0	16.1
	100.0	100.0	100.0	100.0

None of the samples contained the commonly-recognised skin irritant substances caustic soda, anhydrous sodium carbonate (soda ash), or sodium silicate. Skin irritation from washing powder is the result of mild alkali burns usually due to careless handling of the powder. To minimise the risk of such burns the powder should be made into a paste prior to use and not come into contact with the hands.

Bedding and Upholstery Filling Materials.

Of the 40 samples of flock, fibre, and kapok submitted 15 failed to attain the standard of cleanliness required under the new Bedding and Upholstery Regulations of 1948.

Insect Sprays.

The 13 different brands of insect spray examined showed wide variation in insecticidal value.

All contained DDT in proportions varying from 0.7 to 7.0 per cent., the average being 3.4 per cent. Active pyrethrins were present in 7 of the samples in proportions varying from 0.05 to 0.16 per cent. Organic thiocyanate was present in one sample only to the extent of 3.5 per cent. Considering the cumulative toxic properties of DDT, it cannot be too firmly stressed that foodstuffs and food containers should be carefully protected from sprays containing this substance and inhalation of such sprays should be avoided as far as possible.

Drugs and Medicines.

Of 164 samples of drugs and medicines examined 46 failed to conform with prescribed standards or had claims that were incorrect or misleading. A number of medicines was examined for accuracy in dispensing. Calamine lotion, tincture of iodine, hydrogen peroxide, glycerine, borax, alum, sulphur, and many other lines were examined relative to British Pharmacopoeia standards. A number of samples, as usual, were associated with complaints from the public.

Calamine Lotion.—The composition of the calamine lotion on the market was far from uniform. None of the 16 different brands examined conformed with the prescribed standard. All were deficient in zinc compounds in proportions varying from 7 to 74 per cent. and most of the samples showed some deficiency in glycerine.

Effervescent Saline Powders.

Five common brands of effervescent saline powder were examined with results as shown in Table LXIX.

TABLE LXIX.
COMPOSITION OF SOME COMMON EFFERVESCENT SALINE POWDERS.

	No. 1.	No. 2.	No. 3.	No. 4.	No. 5.
	Per cent	Per cent	Per cent.	Per cent.	Per cent.
Sodium Bicarbonate	12.0	10.0	49.0	12.0	59.0
Tartaric Acid .. ..	..	14.0	51.0	14.5	41.0
Citric Acid	13.5	..	..	..	..
Sugar	74.5	76.0	..	70.5	..
Magnesium Sulphate (Epsom Salts) .. ..	..	..	..	3.0	..
Lemon Essence (Less than 0.05 per cent.)	Present	Present	Nil	Present	Present
	100.0	100.0	100.0	100.0	100.0

Preparations of the effervescent saline type are still occasionally wrongly described as “Fruit Salines” or “Fruit Salts.” Such preparations have a definite medicinal value but no fruit value whatever.

Dispensing Error in Medicines.

As a check on the accuracy of dispensing of medicines, the following simple prescription was submitted to 12 different pharmacies:—

Potassium bromide .. 20 gr.
Syrup 20 min.
Chloroform water to $\frac{1}{2}$ ounce

Judged on a potassium bromide basis—

- 6 of the medicines showed a dispensing error under 5 per cent.;
- 2 of the medicines showed a dispensing error between 5 and 10 per cent.;
- 2 of the medicines showed a dispensing error between 10 and 20 per cent.;
- 2 of the medicines showed a dispensing error over 20 per cent.

A dispensing error up to 10 per cent. for such a medicine might be accepted as reasonable, but four of the samples, or 1 in 3 of those examined, exceeded this figure.

Headache Powders and Tablets.

Twenty-one different brands of headache powders and tablets were examined.

Acetanilide was not present in any of the samples.

One sample of aspirin tablets was misdescribed as A.P.C. tablets.

The A.P.C. powders were fairly uniform in composition, and the weight of the powder was the chief factor in comparative potency.

The prescribed maximum weight for any single A.P.C. powder is 15 grains. Of the samples examined the individual powders varied in weight from 8.0 to 14.4 grains.

Four different brands of aspirin tablets were examined and all conformed reasonably with official requirements. There was little, if any difference in therapeutic value between the several brands. The melting point of the chloroform extract in two of the samples was as low as 118° C. or considerably below the prescribed range of 135–138° C. This lowering of the melting point appeared to be of little significance, being due chiefly to the presence of a small amount of fatty excipient in the aspirin residue.

Tobacco and Cigarettes.

Of 186 samples of cigarettes, tobacco, and cigars received for examination, chiefly from the King's Warehouse, 80 samples were condemned as unfit for smoking.

The spoilage was due to mould or insect attack. The mould was associated in most cases with a high moisture content of the tobacco. The moisture content of the mouldy tobacco varied from 20 to 26 per cent., and that of the normal tobacco from 11 to 15 per cent.

Arsenic in Leaves of a Poisoned Tree.

A sample of fallen leaves from the tree *Eucalyptus populifolia* (poplar gum), one month after ringbarking and poisoning with arsenic pentoxide, was submitted from Western Queensland for examination as to arsenic content. The leaves contained arsenic (As_2O_3) at the rate of $\frac{1}{14}$ grain to the pound.

Faulty Canisters in Poison Gas Respirators.

Two respirators for use against low dilutions of hydrogen cyanide after fumigations were submitted for an opinion as to condition.

Both were of standard pattern with all parts in good order except the canisters.

According to the labels the canisters were filled in September, 1941, and consequently should have been discarded years ago. It was fortunate that no trouble was associated with their prolonged use. The life of a canister depends upon the concentration of the gases absorbed, the duration of exposure, and the manner in which it is stored when not in use. Every care should be taken by those using respirators in poison gas atmospheres to see that the canisters are in good order.

Canisters should be changed every year at least, even if not used over that period.

Commerce and Agriculture.

For the Federal Department of Commerce and Agriculture 1,115 samples were examined, an increase of 189 on last year's figures. Most of the work was in connection with export, standards and a summary of the samples examined is given in Table LXX.

TABLE LXX.
SUMMARY OF SAMPLES EXAMINED FOR THE
DEPARTMENT OF COMMERCE.

Nature of Sample.						Number Examined.
Liquid Egg	..	..	..	..	..	231
Cheese	..	..	..	..	..	198
Honoy	..	..	..	..	..	173
Canned Meat	..	..	..	..	..	111
Butter	..	..	..	..	..	91
Fruit Juice	..	..	..	..	..	83
Jam	..	..	..	..	..	73
Canned Fruit	..	..	..	..	..	66
Canned Beans	..	..	..	..	..	47
Miscellaneous	..	..	..	..	..	42
						1,115

The miscellaneous samples include sauce, chutney, ghee, milk, milk powder and cream.

Other Departments and Public.

A further 138 samples were examined for the public and for other State and Federal Departments outside Health and Home Affairs and Commerce and Agriculture.

This work covered a wide field and included samples of paints, soaps, fabrics, and roofing iron as well as foodstuffs.

SECTION 2.

TOXICOLOGY, BIOCHEMISTRY, AND INDUSTRIAL HYGIENE.

I. L. B. HENDERSON, B.Sc., A.A.C.I., Officer in Charge; M. J. GUYDER, B.Sc., Senior Analyst, Division II.

The total number of specimens submitted for examination was 974.

Police Department.

This Department submitted 250 specimens during the year, of which 163 were in connection with 45 post-mortem examinations. Poisons

found included strychnine 4, arsenic 4, cyanide 2, nicotine 1, ethyl chloride 1, and barbituric acid or derivatives thereof 10. The remaining 23 post-mortem examinations proved negative.

It is of interest to note that while the incidence of poisoning by arsenic and strychnine has remained fairly constant the yearly number of deaths from barbiturate poisoning is now increasing. Figures are 1945-46, 2; 1946-47, 1; 1947-48, 5; 1948-49, 10.

In addition to these fatal cases, a number of clinical specimens were received from patients admitted to hospital suffering from an overdose of these drugs.

Specimens in connection with two cases of attempted murder were examined, in each case the mode of attack being the addition of strychnine to foodstuffs.

Animal poisonings investigated numbered 8, involving 19 specimens, arsenic or strychnine being the poisons found.

Other specimens examined included dog baits, opium, cocaine, tablets, medicines, waters, foodstuffs, acids, plants, and household furnishings.

Evidence in Court was given when required.

Biochemistry.

The following table indicates the nature, significance, and number of specimens submitted by the Department of Health, hospitals, and medical practitioners:—

Nature of Specimen and Significance.	Number of Specimens.
Blood and/or urine for alcohol, ether or other drugs	113
Urine for lead, mercury, manganese, &c. ..	203
Hair, nails, urine for arsenic	24
Anaesthetic ether for purity	33
Miscellaneous	59
Total	432

The miscellaneous specimens included stomach washings, cerebro-spinal fluid, vomitus, faeces, lungs, tissue, &c.

The anaesthetic ether specimens examined were checks on the purity of stocks held by hospitals throughout the State. All ether used in Queensland for anaesthetic purposes now contains a small proportion of hydroquinone as a stabilising agent.

Lead in Urine.—Of the 187 specimens examined for the presence of lead 33 were found to contain more than the accepted normal of 0.07 milligram per litre. In all cases where abnormal amounts were detected the medical practitioner concerned was requested to submit another specimen for further examination. Six of the abnormal findings were confirmed, three cases being of industrial origin and three being from children.

Mercury in Urine.—Following on suggestions that the malady of children known as "Pink Disease" might be connected with an abnormal intake of mercury, 14 specimens of urine were examined.

All specimens showed the presence of mercury, ranging in amount from 0.01 to 0.34 milligram per litre, seven results being greater than 0.05 milligram per litre, which a survey of the relevant literature suggests may be taken as a tentative normal.

Urine (Miscellaneous).—Three specimens of urine were examined for the presence of manganese and selenium in connection with possible industrial hazards.

Industrial Hygiene.—During the year the section has given technical assistance to the Medical Officer in Industrial Hygiene. In addition to the urine specimens mentioned in the previous section, 229 dust analyses and dust counts were made and 71 miscellaneous samples were examined. Inspections were made of industrial plants in the metropolitan area, including the following:—

- (1) Temperature and dust surveys at a pottery;
- (2) Dust surveys in the kilns of a brickworks;
- (3) Air tests at a canmaking plant to investigate the possibility of contamination with lead from the soldering baths;
- (4) Air tests at a steel foundry engaged in the manufacture of austenitic manganese steel in connection with a possible case of manganese poisoning;
- (5) Air tests in petrol storage tanks undergoing repair for the presence of highly toxic tetraethyl lead.
- (6) Inspection of a vat-dyeing works for the presence of possible lung and skin irritants among the chemicals being used;
- (7) Air tests in a garage workshop and the cabin of a motor truck for possible contamination with carbon monoxide from exhaust gases;
- (8) Dust surveys at cotton spinning and rope making plants;
- (9) Air tests at a factory making stainless steel drums in connection with a possible hazard from the hydrofluoric acid used in the pickling baths.

Six samples of water taken from domestic tanks at Mount Isa were examined and all contained abnormal amounts of lead, ranging from 0.12 to 0.28 parts per million. Samples taken from nearby bores did not contain any detectable amounts of lead.

SECTION 3.

MINING, MINERALOGY, METALLURGY, AND EXPLOSIVES.

Staff.—V. R. CUNDITH, B.Sc., A.A.C.I., Senior Analyst, Division I., Officer in Charge; D. MATHERS, M.Sc., A.A.C.I., Senior Analyst, Division II.; T. R. LOWTH, B.Sc., A.A.C.I., analyst; F. ESDALE, cadet; H. COUPER, furnace room attendant.

Samples examined:—3,127.

The table shows the sources of work done by this section and the numbers of samples from each:—

Department.	Number of Samples.
Geological Survey and Mines Department ..	600
Portmaster (Explosives)	1,869
Other Departments	291
Public (Chiefly Tanker Examinations) ..	367
	<hr/> 3,127 <hr/>

Mines Department and Geological Survey.

Usually the ores of gold and silver represent the most numerous of all classes of work. This year, however, greater attention has been directed to the survey of coal reserves and in consequence the work involved in the examination of samples from Callide and other fields has been the more sustained. In addition to the usual calorific value and proximate analysis, the ultimate analysis, ash analysis, and fusion point of ash were required.

Tests were made on clays to determine their suitability for brick and pottery manufacture.

The search for alternative supplies of manganese ore for use in the manufacture of steel and storage batteries is shown by the increased number of samples received for partial analyses.

Included in the other types of ores submitted were samples for the determination of antimony, lead, copper, tin, and molybdenum, whilst assessments of battery and beach sands and the identification of minerals were also carried out.

Some samples of limestone dust were found suitable for the treatment of roadway dust in coalmines. In order to be effective in the prevention of coal dust ignition, as well as innocuous to mining personnel. This incombustible dust shall conform with the following requirements:—

- (a) Standard dust is that which will pass a 60-mesh sieve B.S.S. Between 50 and 75 per cent. by weight shall pass through a 240-mesh B.S.S.;
- (b) Shall contain not greater than 3.0 per cent. total silica;
- (c) Shall be readily dispersible.

A ventilation, roadway dust, and dust exposure survey was made at the Burnett Colliery, Selene, in October, 1948.

Other Departments.

Consultative as well as analytical service in the examination of industrial materials such as concrete, sand, plaster, paints, refractories, metals, and corrosion problems was rendered.

Thirty-eight pigments and 161 concrete roofing tiles were received from the Works Department for routine chemical examinations of the colourings used.

The pigments used have been generally satisfactory.

In one instance red lead had been used. The necessity for the absence of toxic compounds in tile colourings is stressed, as there is no alternative in many places but to use the roofing as a catchment for a home water supply.

The usual service to tankers, petrol waggons has been maintained. These are tested for the presence of dangerous proportions of toxic or inflammable gas prior to entry of workmen for cleaning and repair jobs.

A visit to a sewerage shaft and drive showed that the men had allowed insufficient time for ventilation after shotfiring before re-entry.

Advice was sought as to the suitability of some soils or strata to stabilisation with sodium

silicate and calcium chloride solutions to prevent sinking of building foundations.

The inspection of two proposed sites for the fumigation of grain with carbon bisulphide suggested that this class of work could be quite well confined to an area sufficiently isolated as to involve no hazard to the community.

Dust Measurement.

During the violent duststorm which enveloped the State in a pall of dust on 11th October, 1948, an estimation of the dust in the atmosphere over Brisbane was carried out by an officer of the laboratory. Assuming the dust extended upwards for 12,000 feet, and the area of greater Brisbane at 375 square miles, the total weight of dust over Brisbane between 3.45 and 4.45 p.m. on 11th October was 33,000 tons.

Explosives.

Conference.—The second Australian and New Zealand Conference of Chief Inspectors of Explosives and other departmental representatives was held in Melbourne from Tuesday, 26th April, to Tuesday, 3rd May. The conference was officially opened at 2 p.m. on 26th April by the Honourable the Chief Secretary of Victoria, Lieutenant-Colonel W. Watt Leggatt, D.S.O., M.C., E.D. Visits were made to Messrs. Nobel's new factory at Deer Park and to the explosive reserve of the Victorian Explosives Department at Altona. The new factory situated adjacent to the present one is nearing completion and should assist in overcoming the lag in commercial explosive production and the shortage of supplies. At present it is difficult to maintain a sufficient stock of explosives in the Government Magazines for the smooth running of explosive administration. As each new shipment arrives the explosives section of the Government Chemical Laboratory is pressed for immediate importation test to allow orders for explosives to be executed without delay. Explosives play a very important part in industry and shortages might well hold up coal production and large-scale mining operations.

Further consideration was given by the conference to uniformity throughout the States and New Zealand in the control of fireworks and regulations towards this end were formulated and are about to be approved by Conference. These regulations will be recommended for adoption in Queensland.

Other matters which received attention included wire binding and marking of explosive cases, the use of free running explosive, storage of explosives in central city areas, handling of explosives at wharves and anchorages, and the control of road transport of explosives.

Surplus Army Explosives.—Under the direction of V. R. Cundith, Inspector of Explosives, several road movements of explosives were carried out. These involved the transport of surplus army explosives from the Darra magazines of the Department of the Co-Ordinator General of Public Works to Greenup, Inglewood, the Railway yards at both Darra and

Roma Street, and a magazine in the Nambour district. The latter explosive will be consumed effecting land drainage in the district. With the removal of the last of the surplus army explosive from Darra to Northern magazines for use in State developmental work the necessity for this work will cease. The Police Department gave valuable assistance in the movements by controlling road traffic along the various routes.

Magazines.—With the return to more normal conditions a great increase in the importation of fireworks has resulted and many new licenses have been issued to cover the magazineing of these explosives. The increased use of explosives in ventures outside the field of mining and quarrying—such as land clearing, draining, and excavating—has been reflected in the demand for advice on the construction of magazines. The explosive administration have plans covering such structures and these have been supplied free to interested parties. Many inspections of magazines were carried out during the year, mainly in connection with the housing of fireworks.

Fireworks Importation and Control.—Co-operation between the Commonwealth Department of Trade and Customs and the State explosive administration covering the inspection of fireworks from overseas has worked smoothly and effectively. This has brought about a better control than previously existed because fireworks are inspected on the wharves before entering the State. During one such inspection the examination of a grey powder suspected of being a prohibited explosive composition disclosed the presence of arsenic which was incorporated to produce a yellow smoke on discharge. Accordingly regulations prohibiting the manufacture or sale of fireworks containing arsenic or any other poison specified in Schedule 1 of the Poisons Regulations of 1947 were introduced last year.

With fireworks of the bungler or cracker type for shop sale the only composition which is considered safe in the hands of children is ordinary gunpowder. Several parcels of bungler type fireworks of Chinese origin contained a grey powder of a highly explosive character far too dangerous for discharge by children. These were seized and destroyed.

Although the explosive section is watchful in the interest of child safety, it is difficult to control the home manufacture of fireworks. One widely-read publication some time back detailed for the enlightenment of its young patrons directions for the manufacture of a highly dangerous fireworks composition. It would be well-nigh impossible to control the sale or possession of the chemical ingredients of these dangerous mixtures, but the co-operation of pharmacists and others engaged in the chemical trade might do something to prevent their purchase by children. Many pharmacists do exercise care in this direction, but with many schools now teaching chemistry the possibility of securing supplies is greatly increased. In these schools all such chemicals should be kept securely locked away.

Samples examined: 1,869.

The following table details the type, source, and quantity of industrial explosives imported

into Queensland for the year ended 30th June, 1949:—

TABLE LXXI.

Type.	Australian.	Overseas.
	Cases.	Cases.
Blasting gelatine	213	..
60% gelignite S.N.	890	..
A.N. gelignite " 60 "	16,065	..
50% gelignite S.N.	220	..
A.N. gelignite " 50 "	13,936	302
Ajax	11,514	..
Quarry monobel	4,599	..
40% ligdyn	2,614	..
A.N. ligdyn " 40 "	450	..
Geobel No. 2	3,462	..
Free-running explosives	161	..
Blasting power	750	..
Total	54,874	302
	Number.	Number.
No. 6 detonators	2,100,000	..
Electric detonators No. 6 x 72"	130,000	287,000
Electric detonators No. 6 x 120"	30,000	..
Electric detonators No. 6 x 144"	5,000	..
Electric detonators, submarine	7,000	..
Gasless delay-action detonators 144" .. .. .	..	9,820
	Feet.	Feet.
Blue fuse	5,428,800	..
Red fuse	7,200	..
Plastic cordtex .. .. .	..	163,500

No explosives were condemned during the year.

Licences in Force.

—	1947-48.	1948-49.
Bulk magazines	6	14
Retail magazines	499	549
Rackarock	1	2

SECTION 4.

CUSTOMS, STORES AND ROADWAY MATERIALS.

Staff.—J. R. W. ADAMSON, Senior Analyst, Officer in Charge; J. C. YULE, Dip. Ind-Chem., Assistant to Analyst; J. V. FOREMAN, Assistant to Analyst.

The total number of samples examined by the section was 6,291, an increase of 3,174 over the previous year.

The Commonwealth Customs submitted 5,622 samples. The work for this Department consists principally of analyses to determine the classification for import and excise duties, and also the checking of thermometers, hydrometers, &c., to determine the correctness of their graduations.

The remainder of the samples were submitted by the following departments:—

Main Roads Commission	359
State Stores Board	200
Queensland Railways	12
Public	8
Commonwealth Departments	21
Other Departments	69
	669

The samples for the Main Roads Commission consisted chiefly of bitumens, tars, and emulsions.

The State Stores Board submitted samples of textiles, inks, carbon papers, disinfectants, paints, and cleansers.

The Public Works Department submitted a large number of paints and paint materials for examination.

Many of the paints submitted were of an inferior nature. Some contained an excessive amount of volatile thinners, with a resultant deficiency in the drying oil constituent. Such paints dry quickly, but having a low drying oil content soon fail, and either chalk or peel off the painted surface. Other paints submitted were badly affected by the complaint known as "livering." No satisfactory explanation has as yet been found for the cause of this complaint. Paints so affected assume a thick liverish appearance and cannot be thinned down to a brushing consistency without almost complete loss of their covering power.

Still other paints contained admixtures of lithopone and lead compounds. Paints of this composition soon become blackened on exposure to bright sunlight, and consequently are of no use for external painting and they are not very satisfactory for internal use.

This section continues to exercise control over the importation of fireworks into the State. During the year a large number of cases of fireworks were examined and the great majority were classified as suitable for storage, transport, and use. However, one case containing the highly sensitive mixture of potassium chlorate, sulphur, and aluminium powder was detected and shipped back to China. Several cases of fireworks containing arsenical compounds were also detected. These fireworks on ignition emit dense clouds of arsenical fumes. They were also sent back to their country of origin and arrangements have been made to prevent a recurrence of this trouble.

The total number of samples examined by this section shows a very considerable increase over previous years, and if this rate is maintained extra staff will be required to cope with the work.

SECTION 5—WATER.

J. A. FORBES, A.A.C.I., Analyst in Charge;
W. N. CARVOSSO, A.A.C.I., Analyst.

Although two analysts are now engaged full time on the examination of waters, the pressure of work in this section of the laboratory has not been overcome. The following table indicates the source and the number of samples respectively examined:—

Department.					Number of Samples.
Health and Home Affairs	..	..	..	..	163
Irrigation and Water Supply	..	..	..	..	726
Local Government	..	..	..	..	107
Other Departments	..	..	..	..	109
Public	..	..	..	..	136
Total					1,241

Iron Bacteria.—For some time past samples of water of peculiar interest have been submitted to the laboratory. Their abnormal character has been traced to the presence of *Crenothrix* (iron bacteria). These microscopic forms of life have the power to oxidise soluble (ferrous) iron to insoluble (ferric) compounds, thereby deriving energy for their vital functions. Neither light nor oxygen are essential to their multiplication, which accounts for their presence in shallow bores and circulating pipe lines where light is excluded. The insoluble iron compounds are deposited as hard incrustations, causing partial to complete blockage. The organisms accentuate the colour of the water and cause turbidity. In cases of profuse contamination the water may develop objectionable odours due to the decay of dead organisms.

The prevention of iron bacterial growth in water involves the removal of free carbon dioxide and oxidation of the iron and manganese by adequate aeration and the addition of lime to remove combined CO₂, iron and manganese and to increase alkalinity and pH. Subsequent sedimentation and filtration are necessary. Water so treated, provided it is slightly alkaline, should not develop further growths when stored, but chlorination is recommended under conditions where water is circulated. Treatment of subsurface waters in bore pipes to prevent depositions of iron compounds is impracticable.

A survey of the condition of the waters of the Pine River estuary was conducted last July to ascertain if the discharge of paper mill effluent into the estuary might create a nuisance. Samples were collected at the mouth and at two points upstream where tidal influences operated. A further sample was taken at Young's Crossing well above tidal access. The results disclosed a progressive decrease in saline content from the mouth upwards, due to the dilution effect of the freshwater intake. The oxygen saturation percentage of the water taken from the mouth of the river was 97.5 and at Young's Crossing 100, whilst the values for the samples from points within the estuary ranged from 75 to 81. Considering the volume of water available in the estuary for dilution and its degree of oxygenation, it was considered that the waters of the estuary would be capable of rendering innocuous the volume of effluent which it was anticipated would be put into the river under the proposed scheme for operating the mill.

Another investigation concerning the possible effect which an effluent of a different category might have on the waters of the Brisbane River, more especially as regards fish life, was conducted by the water section. A "synthetic effluent" was prepared in accordance with the data submitted concerning the composition of the final effluent which would be passed to the river under the conditions of operation of the works.

The following tabulation discloses the results of the tests:—

Number of Test.	Parts Effluent.	Parts Water.	Dilution.	pH.	Observation.
1	1	Nil	Undiluted	2.3	(Using <i>Gambusia</i> fish.) On immersion very vigorous for about one minute, then became sluggish and after five minutes inert. On being placed in diluting water, showed slight recovery but lapsed inert in less than five minutes and became lifeless
2	1	Nil	Undiluted	6.5	pH raised by addition of Sodium Carbonate. Fish alive and vigorous after 24 hours
3	1	Nil	Undiluted	5.0	pH raised by addition of Sodium Carbonate. Fish within 10 minutes almost inert, quickly recovered in fresh tap water and alive and vigorous after 24 hours
4	1	4	1 in 5	3.2	Fish alive and vigorous for about 40 minutes then gradually became sluggish ; after 18 hours, fish were lifeless
5	1	9	1 in 10	6.0	Fish alive and vigorous after 24 hours
6	1	19	1 in 20	6.8	
7	1	39	1 in 40	7.6	
8	1	79	1 in 80	8.3	
Test using river water taken at site behind Laboratory, pH 7.7, Sodium Chloride 780 grains per gallon :—					
9	1	9	1 in 10	3.9	Fish alive and vigorous after 24 hours.

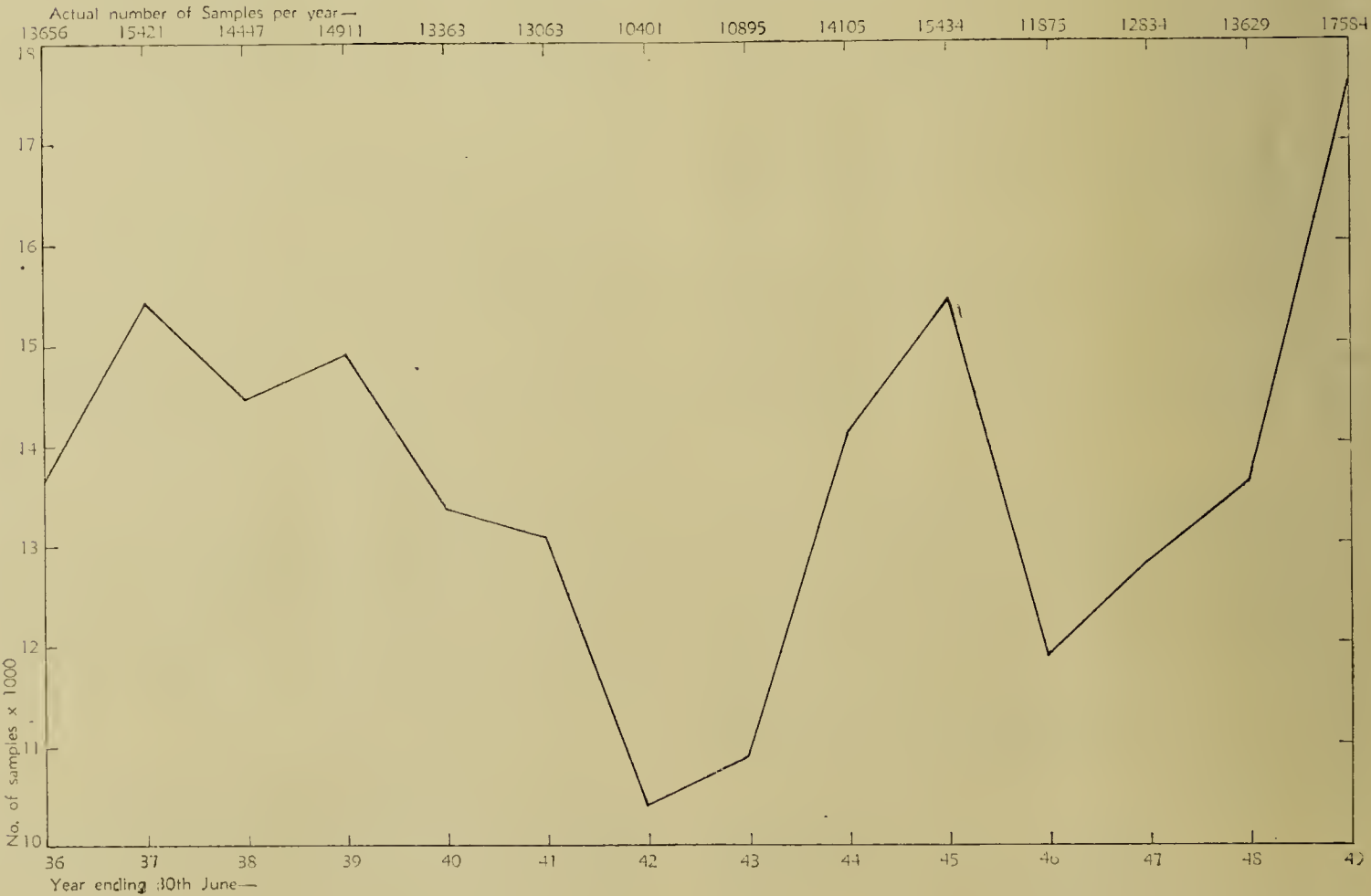
An analysis of the above results shows:—

- (1) Whilst the undiluted effluent of pH 2.3 is decidedly harmful to fish (test No. 1) and of pH 5 is also deleterious (test No. 3), the effluent adjusted to pH 6.5 is quite harmless (test No. 2) ;
- (2) The effluent diluted 1 in 15 (pH 3.2) is deleterious (test No. 4) ;
- (3) The effluent at dilutions 1 in 10 upwards to 1 in 80 (tests 5 to 8) is quite harmless.

Test No. 9 is instructive, in indicating that with a dilution of 1 in 10, even though the pH is only 3.9, fish can live effectively in the water.

It would appear from these tests that both pH and dilution are factors to be considered in the case under review. If the pH is raised above 6 dilution is of no consequence, and if the dilution is brought to 1 in 10, even though the pH is only 3.9, fish are able to live.

GRAPH SHOWING ANNUAL VARIATION IN NUMBER OF SAMPLES SUBMITTED TO GOVERNMENT CHEMICAL LABORATORY, 1/7/35 to 30/6/49



SECTION OF MATERNAL AND CHILD WELFARE.

Director: H. C. MURPHY, M.B., B.S.

Deputy Director: G. REID, M.B., Ch.B., D.P.H.

Part-time Pre-school Child Health Officer: T. HENRY R. MATHEWSON, M.B., Ch. B.

Superintendent: D. BARDSLEY, A.T.N.A.

Acting Deputy Superintendent: A JENKINSON, A.T.N.A.

TABLE OF CONTENTS.

Introduction—Breast Feeding—Prematurity—Vital Statistics—The Year's Work—Extensions of the Service—Rail Car—St. Paul's Terrace Home—St. Paul's Terrace Training School—Clayfield Home—Clayfield Training School—Maternal and Child Welfare Home, Toowoomba—Toowoomba Home Training School—Maternal and Child Welfare Home, Sandgate—Centres for Expectant Mothers or Antenatal Clinics—Correspondence Service for Expectant Mothers—Director's Consultant Centre—Toddlers' Centres—Correspondence Section—Social Welfare Section—Lecture Demonstrations to School-girls—Kindergarten and Kindercraft Trainees—Medical Students—Newspaper Articles—Publications of the Service—Publicity—Staff—Baby Clinic Social Club—Acknowledgements—Visits to Newborns and Attendances at Centres.

INTRODUCTION.

The activities of the Service have again demonstrated its extreme flexibility as a public health unit and the possibility for research into all matters affecting the life and health of mothers and children which lie within its scope. This is due in part to the training and experience of its medical officers and nurses and the tremendous number of children of all degrees of nutrition and development and from all grades of society which pass annually through one or another of the various sections of the Service.

Probably the most interesting item of research in the past year has been that carried out at the suggestion and with the co-operation of the Director of the Medical Research Institute in connection with the possibilities for early detection and control of infantile diarrhoea. The action of the Government in extending "*The Health Acts, 1937 to 1948*," which took place in March of this year, and made diarrhoea of over forty-eight hours' duration a notifiable disease in the case of children under two years of age, should provide a valuable means for the early detection and prevention of epidemics of infantile diarrhoea such as occurred in this State in 1947. In conjunction with this the routine investigation of the faeces of every child admitted to the mothercraft homes under the control of this Service has been continued throughout the year and, in addition, the faeces of many infants attending centres with a history of comparatively slight bowel upsets have been investigated. As a result of this procedure a fair number of *Salmonella* carriers have been discovered, while other infants have been shown to harbour the *Shiga* and *Flexner* bacilli, and in one instance bacilli of the *Sonne* group were isolated. It is to be noted that these investigations have all been done on healthy or comparatively healthy infants.

How many of our infant population are carriers and thus potential sources of an epidemic is impossible to say at this stage, but with the compulsory notification of diarrhoea the prevention of an epidemic or the control of the early stages of an outbreak should be much more likely of accomplishment.

The research so far carried out has provided the Service with a potent weapon in the matter of education, both of its trainee nurses and the mothers attending centres with their babes. There is no doubt that the personal teaching carried out by the Maternal and Child Welfare sister from the inauguration of the Service in 1918 was one of the greatest factors in the reduction of the incidence of the infantile dysentery, which was the main cause of infantile mortality and morbidity in those early years. There is every reason to suppose that the sisters of this Service can play as active a part in connection with parent education in regard to the *Salmonella* infections as they did in connection with prevention of dysentery. It has definitely been found that mothers are more receptive to education of this type when they are voluntarily seeking help with their babies and in personal contact with a sister in whom they are prepared to place confidence.

Another field of investigation having a distinct bearing on infantile morbidity, especially in relation to the diarrhoeas, is that of the number of infants deprived at an early age of their mother's milk. It was stated by the Director of the Medical Research Institute that one of the great lessons learned from the 1947 gastro-enteritis epidemic was that during that epidemic the proportion of breast-fed infants who developed gastro-enteritis was only 1 in 100. With this in mind, the sisters in charge of each home and centre have been asked to supply each month a list of babies who were completely artificially fed on admission, with the reasons given for the weaning of the baby. The results of this survey appear in a subsequent paragraph.

Extensions of the Service have been directed mainly to providing services for outback areas. With the enlargement of the Mount Isa works, the three-weekly call of the rail car proved insufficient and a centre was opened in a local hall with a subcentre at Camooweal.

A further interesting experiment was made with the assistance of Dr. Alan Vickers, the flying doctor attached to the Cloncurry base, and this may prove the nucleus of an important service to mothers and children who have had no personal contact with our sisters, although a number of them have been reached by the correspondence section.

BREAST FEEDING.

Breast milk is the natural food of every baby, and artificial foods, no matter how they are modified, are still artificial. At the present time there is an increasing tendency to wean babies for causes which are sometimes trivial.

During the year at least 766 infants were seen at the Maternal and Child Welfare centres who were artificially fed either from birth or shortly afterwards. The reasons given for weaning, in their order of precedence, were failure of or diminished lactation, illness of the mother, abnormal conditions of the breast and nipples, illness of the infant, adoption, poor suction, economic conditions, disinterestedness of the mother, and congenital abnormalities. Three hundred and thirty mothers stated that their lactation either was not established or diminished either in hospital or on returning home. In these cases much skilled help is required in accomplishing the natural maternal function of breast feeding, and that skilled help is available to practically every mother in Queensland and is provided by our homes and our centres, but only after the mother leaves hospital. During the mother's stay in hospital the establishment of a mothercraft section in maternity hospitals would no doubt prevent a great deal of trouble due to failing lactation; while it is granted that quite a number of cases do not respond to treatment, our experience proves that a large number do.

It should not be necessary to stress the importance of breast feeding, but unfortunately this is so, the present tendency in difficult cases being to take the easy way out, and wean.

Writing in the "British Medical Journal," 22nd January, 1949, Dr. Charlotte Naish records the visits required during the first year of life by 100 successive babies born in her practice. As feeding problems are attended to at her surgery, only sick children are visited, and in the series recorded, both breast fed and artificially fed infants came under her notice. Twenty-seven per cent. of breast fed babies were visited, as against ninety per cent. of the artificially fed infants.

Again in the "British Medical Journal," 22nd January, 1949, American figures were quoted in a series of cases of pyloric stenosis. Of 46 artificially fed infants with pyloric stenosis, 5 died. Of 100 breast fed babies with pyloric stenosis, none died.

In his review of Dr. Charlotte Naish's book, "Breast Feeding," Charles McNeil states: "The present low standard of practice in breast feeding is mainly due to downright ignorance, the bad tradition of nursing lore, and the lack of serious clinical study." It is to be hoped that with the inclusion of lectures and demonstrations on Child Health in the medical curriculum this lack will be remedied.

PREMATURITY.

The Committee of the National Health and Medical Research Council (1944) which enquired into the Medical Aspects of the Decline of the Birth Rate made the following recom-

mendation with regard to statistics—national statistics to be compiled relative to three major groups of infants classified as follows:—

- (a) Below 2 lb. 12 oz.—nonviable infants;
- (b) 2 lb. 12 oz. to 5 lb. 8 oz.—premature infants;
- (c) 5 lb. 8 oz.—mature infants.

It is generally agreed that there is a definite need for a universal lower limit of viability for handling statistics relating to the premature baby, and very good evidence has been submitted by Henderson in favour of adopting a minimum weight standard of 2 lb. 12 oz. as the only criterion of viability.

The only objection to this lower limit of viability could be that it might engender an attitude of carelessness in the handling of infants under 2 lb. 12 oz., the assumption being made that the infant cannot survive.

It is to be hoped that this recommendation will be adopted universally, or at least throughout Australia, as very valuable uniform data on prematurity statistics would then become available.

In Queensland for the year 1948, 294 premature infants died, representing 37.8 per cent. of deaths occurring under 1 year. The corresponding figures for 1947 were 278, representing 31.8 per cent. of deaths occurring under 1 year.

Of the deaths under 1 month, prematurity was responsible for 291 or 51.5 per cent. For 1947, 277 deaths due to prematurity occurred under 1 month, or 45.56 per cent.

Completed questionnaires from 101 extra-metropolitan public hospitals show the following figures:—

Births, 12,251; premature births, 377; percentage of live births, 3.1 per cent.; deaths of premature infants, 112; percentage mortality of premature babies, 30 per cent.

At the Brisbane Women's Hospital, 7,498 infants were born, and of these 290 were premature, representing a percentage of live births of 3.9 per cent. Of these 290 births, 96 infants died, or 33 per cent.

CAUSATION OF PREMATURITY.

From completed questionnaires received from 101 public hospitals in Queensland as to the cause of prematurity in the 438 premature births which occurred the following main causes in 418 of these were:—

	No.	%
Cause unknown	253	58
Toxaemias	56	12.8
Multiple pregnancy	54	12.4
Anti-partum haemorrhage	14	3.2
Albuminuria and nephritis of pregnancy	13	2.9
Hypertension	8	1.8
Placenta praevia	6	1.4
Hydramnios	5	1.1
Illness of mother	5	1.1
Early rupture of membranes	4	0.9

SUMMARY.

	Live Births.	Premature Babies.	Per Cent. of Live Births.	Deaths of Premature Babies.	Per Cent. Mortality of Premature Babies.
Queensland Public Hospitals	19,749	667	3.4	208	31
Extra Metropolitan Public Hospitals	12,251	377	3.1	112	30
Brisbane Women's Hospital	7,498	290	3.9	96	33
(a) Public	2,121	108	5.1	38	35
(b) Intermediate	5,377	182	3.4	58	31.9

VITAL STATISTICS.

Outstanding features of vital statistics for 1948 are:—

- (1) A lower maternal mortality rate—viz., 1.47 per thousand live births—than the record low rate of 1947—viz., 1.62 per thousand live births. The 1948 rate was less than one-half of that prevailing up to four years ago (3.02);
- (2) The lowest rate of infantile mortality ever recorded (28.0 per thousand live births);
- (3) A fall in the marriage rate—which still, however, remained above normal;
- (4) A slight decrease in the birthrate from the peak rate of 25.7 per thousand mean population in 1947 to 24.7.

BIRTHS.

During the year 1948, 27,858 births were registered, a decrease of 500 on the previous year, which was the highest on record. The crude birth rate, 24.7, was the lowest since 1944, when the rate was 23.1, but, apart from the years 1945 to 1947, it is necessary to go back to 1923 to find a rate as high as in 1948.

In 1948 there were 14,382 males and 13,476 females born. Usually male births are about 5 per cent. more than female births, but in 1948 males exceeded females by 6.7 per cent.

The natural increase of births over deaths of 17,396 for 1948 was equal to an increase of 1.57 per cent. of the population, compared with 1.66 per cent. for 1947 and 1.51 per cent. for 1946.

MARRIAGES.

Registrations of marriages during the year numbered 10,125, compared with 10,999 in 1947, giving a marriage rate of 9.0 per 1,000 mean population compared with 10.0 in 1947. This rate was the lowest since 1939, when the rate was also 9.0, but, apart from these years it was the highest rate recorded since 1873.

Minors married during the year numbered 3,604, of whom 592 were males and 3,012 were females.

DEATHS.

Maternal.

The number of deaths of women due to diseases of pregnancy and childbirth was 41 in 1948, with a corresponding mortality rate of 1.47 per thousand live births. Both these figures set new records, falling below the record low levels experienced in 1947.

The following table shows the progressive decline in maternal mortality since 1940:—

TABLE LXXII.

Year.	Maternal Deaths.	Maternal Mortality Rate.
1940	96	4.70
1941	92	4.28
1942	84	3.97
1943	89	3.83
1944	74	3.02
1945	66	2.47
1946	61	2.26
1947	46	1.62
1948	41	1.47

Of the 41 deaths occurring in 1948, 24 followed childbirth and 9 were due to diseases and accidents of pregnancy (excluding abortion).

The causes of the 24 deaths due to diseases and accidents of childbirth were as follows:—

Haemorrhage of childbirth and puerperium	8
Infection during childbirth and puerperium	6
Puerperal toxæmias	4
Other accidents of childbirth, including caesarian section	4
Other diseases of childbirth	2

The causes of the 9 deaths due to diseases and accidents of pregnancy were as follows:—

Ectopic gestation	5
Toxaemia of pregnancy	3
Other diseases and accidents of pregnancy	1

DEATHS.

Infantile.

Deaths of infants under one year numbered 779, compared with 874 in 1947, a decrease of 95. The infantile mortality rate of 28.0 per 1,000 live births was the lowest ever recorded for the State. The metropolitan and tropical areas showed marked decreases—the rate for the metropolitan area fell from 34.7 in 1947 to 30.0 in 1948, and that for the tropical area from 31.3 to 27.0. The rate for the tropical area in 1942 was 44.5.

The fall in the rate for the whole State was due to substantial decreases in deaths of infants due to diarrhoea and enteritis, injury at birth, congenital malformations, whooping cough, and haemorrhagic condition of the newborn.

There were 565 deaths of children aged under 1 month and 214 deaths of children aged from 1 month to under 1 year during the year, the corresponding mortality rates being 20.3 and 7.7 per thousand live births. The mortality rate for children aged under 1 month (20.3) is the lowest ever recorded in the State.

The following table shows the major causes of deaths under 1 year, under 1 month, and 1 month and under 1 year in the tropical, sub-tropical (excluding metropolitan), and metropolitan areas:—

TABLE LXXIII.

Disease.	Under 1 year.			Total.
	Tropical.	Subtropical.	Metropolitan.	
Bronchopneumonia	22	19	28	69
Diarrhœa	10	6	43	59
Congenital malformation of the heart ..	10	16	16	42
Other congenital malformations	7	21	16	44
Prematurity	55	134	105	294
Injury at birth	24	40	21	85
Asphyxia	6	18	15	39
Congenital Debility	4	10	4	18
Other diseases peculiar to first year of life	9	15	10	34
Violent or accidental deaths	3	8	3	14

Disease.	Under 1 month.			Total.
	Tropical.	Subtropical.	Metropolitan.	
Bronchopneumonia	2	6	8	16
Diarrhœa	1	..	6	7
Congenital malformation of heart	7	15	10	32
Other congenital malformations	5	12	9	26
Prematurity	54	134	103	291
Injury at birth	24	40	21	85
Asphyxia	6	18	15	39
Congenital debility	2	9	4	15
Other diseases peculiar to first year of life	9	14	9	32

Disease.	1 month and under 1 year.			Total.
	Tropical.	Subtropical.	Metropolitan.	
Bronchopneumonia	20	13	20	53
Diarrhœa	9	6	37	52
Congenital malformation of heart	3	1	6	10
Other congenital malformations	2	9	7	18

Deaths of Children aged One Year and under Five Years.

Deaths of children aged one year and under two years during the year numbered 80, representing a death rate of 2.9 per thousand children in that age group.

The chief causes of deaths were—

Accidents	14
Bronchopneumonia	10
Diarrhoea and Enteritis	8
Congenital malformations	7
Pneumonia (unspecified)	6

Of the 14 deaths due to accidents, 5 were caused by burns and 4 by drowning.

Deaths of children aged two years and under five years during the year numbered 86, representing a death rate of 1.2 per thousand children in that age group.

The chief causes of deaths were—

Accidents	17
Congenital malformations	7
Bronchopneumonia	7
Influenza	6

Of the 17 deaths due to accidents, 7 were caused by motor accidents, 4 by falls, and 3 by drowning.

THE YEAR'S WORK.

The total attendances at the 193 centres numbered 392,010, compared with 396,380 the previous year. The small drop in the attendances is due to various reasons, chief of which are—

- (1) Decrease in the birthrate.
- (2) Staff shortage. Two centres, Gayndah and Barcaldine, were closed for two months for this reason. Sisters in charge in other centres who became ill could not be relieved as no relieving staff was available.
- (3) Floods in Central and Northern areas in February, March, and April. Cyclonic weather was experienced in the majority of centres north of Bundaberg in the month of March. Heavy flooding and cyclonic weather was also experienced in the Charleville district during March.
- (4) Epidemics of whooping cough and influenza.
- (5) The one-day weekly tram strike covering four weeks.

During the year, a request was received from Mrs. Allan, wife of the Minister in charge of the Presbyterian Mission at Mapoon, for help

in caring for aboriginal infants and young children. Clinic cards and literature were sent to Mrs. Allan and approval was granted for the supply of a set of scales when available.

EXTENSIONS OF THE SERVICE.

Through the courtesy and co-operation of the flying doctor, the sister in charge at Charleville was able to accompany him on a visit to the following towns:—Adavale, Windorah, Stonehenge, Jundah, and Yaraka. The actual distance travelled was 662 miles, and the travelling time 7 $\frac{3}{4}$ hours.

Thirty-six infants and 3 expectant mothers were seen, and to avail themselves of this service mothers travelled from 5 to 56 miles. This service will be a quarterly one, depending on climatic conditions.

Most of the children seen were well-nourished, and several of the mothers had availed themselves of the correspondence service.

In keeping with the policy of the Department of Health and Home Affairs to care for as many of the mothers and children in the sparsely-populated areas of the State as possible, a sub-centre has been opened at Camooweal.

During the year the following new centres were opened:—Ingham on 16th August, 1948, and Mount Isa on 10th January, 1949. The following new sub-centres were opened:—Moura, which is visited from Biloela, on 29th July, 1948; Halifax on 14th September, 1948, and Cardwell on 17th September, 1948, both of which are visited from Ingham; Geebung, which is visited from the Nundah centre, was opened on 5th October, 1948; Tarzali, visited from Atherton, was opened on 5th November, 1948; and Camooweal, visited from Mount Isa, was opened on 14th June, 1949.

Eight new toddlers' clinics were established during the year, of which 6 were opened in the metropolitan area and 2 in the country. The 6 metropolitan centres were opened at Stones Corner, Bulimba, Graceville, Hamilton, Kedron, and Mitchelton, and the 2 country centres at Rockhampton and Toowoomba. It is intended to establish toddlers' centres at Cairns and Townsville in the near future.

Requests are still being received from many country centres for the establishment of clinics in their areas, and only the shortage of staff and equipment prevents the ready establishment of new centres. Approval has been given for establishment of two new centres at Mount Morgan and Laidley and for nine subcentres at Harristown, Red Hill (Mount Morgan), Walterhall, Kirkhall, Barce, Cloncurry, Snrat, Darra, and North Rockhampton.

RAIL CAR.

With the establishment of Mount Isa as a resident centre, the regular itinerary in the north-west area of the State now includes Cloncurry, Winton, Dajarra, Julia Creek, Hughenden, Kajabbi, and Richmond. Mothers and children were attended at the following stations and sidings not included in the regular itinerary:—Stamford, Whitewood, Corfield, Malbon, Duchess, Oorindi, Maxwellton, Nelia, Nonda, Marathon, Chimbi, Dobbyn, Ohio, Quamby, Malbar, Rifle Creek, Winnegan, Bungunya, Bodkin, Undina, Wariana, and Trevanna.

This service, together with the establishment of centres at Mount Isa and Camooweal, is of great benefit to the mothers in these isolated areas.

A refrigerator has been installed in the rail car and approval given for the installation of a battery-operated electric light system.

ST. PAUL'S TERRACE HOME, BRISBANE.

An increase in the number of mothers and babies admitted into residence was shown for 1948-49 as against the previous year, but the work was again limited by shortage of staff in the between-terms period, it being necessary to reduce the number of babies admitted during four months of the year. Nevertheless, a great deal of work has been done and both staff and trainees have shown keen interest in the welfare and progress of the mothers and babies.

Infants admitted into residence included cases of prematurity, marasmus, malnutrition, nervous vomiting, cleft palate, cleft lip and palate, pyloric stenosis, pyloric spasm, pulmonary stenosis with Tetralogy of Fallot, cretinism, and mongolism, all of whom required special attention with regard to feeding and management. Mothers in residence received treatment for restoration of breast milk and instruction in regard to the feeding and handling of their babies. All mothers bath or oil their babies several times under supervision before leaving the Home, and when the baby is on complementary feeding the care of milk and milk mixtures—how to make milk mixtures and the cleansing and sterilisation of bottles and teats—form part of the instruction received. All mothers are taught the importance of a well-balanced diet and the reason why the various foods are suggested.

During the year several alterations, and improvements have been made to the Home and precincts. A veranda bathroom has been converted into a three-cot isolation ward. The babies admitted remain in this ward until the result of the *Salmonella* test is known. The veranda between the two main buildings has been enclosed to form a lecture room and forty-eight students' chairs have been provided for the use of the trainees. A small room off the mothers dormitory has been fitted up with five hand basins, complete with hot and cold water installation. This forms a treatment room for the mothers. Paths leading to and from the various buildings have been concreted, lawns have been laid and flowering shrubs planted, and the grounds of the Home are kept in perfect order.

Three demonstrations were given to fifth and sixth year medical students during the year by the matron, who was assisted in their preparation by the sister tutor.

Total admissions—mothers 57, babies 90. This involved the giving of 4,368 test feedings, 2,248 complementary feedings, and 9,074 artificial feedings.

ST. PAUL'S TERRACE TRAINING SCHOOL.

This school is for the training of trained registered nurses only. Sixty-nine nurses completed their training during the year, and of these fifty-five passed the examination of the Queensland Nurses' and Masseurs' Registration Board in Child Welfare. Of the nurses who received their training, fifty-

nine were from Queensland, six were from Victoria, one from New South Wales, one from Tasmania, one from South Australia, and one from Western Australia, and nine were discharged members of the Australian Army Nursing Service.

It has been felt for some time that the four months allotted for child welfare training was insufficient in view of the strenuous nature of the course and the period of training has now been extended to six months, and these courses will commence in February, 1950. As a result of this, trainees will get more practical experience in Centre work. The Home at St. Paul's Terrace, which has to close during most inter-term periods, will remain open, and more time will be allowed for intensive study.

Graduation ceremonies were held at the A.T.N.A. Nurses' Club at the completion of each training term, and these happy functions are much appreciated by the trainees. On 24th November, 1948, and 25th May, 1949, certificates were presented by the Hon. A. Jones, M.L.A., Minister for Health and Home Affairs.

CLAYFIELD HOME, BRISBANE.

This Home, now established six years, has grown very rapidly and the requests for admission exceed our accommodation.

Over the past few years the number of artificially-fed infants is increasing, and they seem to be weaned for many varied and, at times, trivial reasons. Many children progress normally on artificial feeding, but those who fail to do so frequently find their way into the Home. The feeding adjustment is often difficult and long and emphasises the value of natural feeding. The difficult feeding of a great number of cases can be attributed to bad parental management and crowded living conditions.

Cases admitted during the past year include twins, a large number for the restoration of natural feeding, infants with cleft palates and hare lips, persistent vomiting, frail babies, and a number of toddlers, most of whom were difficult feeding cases.

One very unusual case was admitted on 16th February, 1949. The infant, aged 38 weeks, whose birth weight was 9 lb., was 15½ lb. on admission. He was a very pale infant with marked anorexia. A few days after admission he passed a number of worm segments, which were identified as *Dipylidium caninum*. After treatment he passed many complete worms and there have been no further segments passed. He is now 59 weeks and 20 lb. 6½ oz.

There were 214 admissions of babies and 100 mothers. This involved 11,723 test feedings, 6,035 complementary feedings, and 20,043 artificial feeding for babies, and for mothers, 3,192 treatments for restoration of breast feeding and special instructions to each mother.

CLAYFIELD TRAINING SCHOOL, BRISBANE.

This school is for the training of previously untrained girls from the age of 16 years upwards. During the year 27 candidates were successful in gaining their certificates of competency issued by the Department of Health and Home Affairs as Child Welfare Assistants.

The number of girls seeking training has increased and a large waiting list is held at the Administrative Office. The lectures given by the Educational Officer to the girls at the various State schools has done much to stimulate their interest in this branch of nursing. As a result of their experience at the Home, many of the trainees commence their obstetric and general nursing training. Since this home was established in 1943, 96 girls have successfully completed their training, and of those 52 have decided to complete their further nursing training.

Graduation ceremonies for successful students were held at the Home in December, 1948, and June, 1949, at both of which the certificates were presented by the Minister for Health and Home Affairs, the Hon. A. Jones, M.L.A.

MATERNAL AND CHILD WELFARE HOME, TOOWOOMBA.

More interest is now being shown in this Home. Doctors at Toowoomba and from surrounding centres have requested admission for nursing mothers, babies, and young children. Many deserving and interesting cases have been treated, including establishment and restoration of breast feeding, premature and frail babies, vomiting babies, and cases of malnutrition, mongolism, pyloric spasm, Pink disease, and Coeliac disease. Two babies awaiting adoption were admitted at the request of the State Children Department and two babies were received into residence when their mothers were admitted to hospital.

The average number of babies in residence at a time has risen to 6 to 7 over the last few months, and it is hoped that in the near future 8 to 9 will be accommodated.

Many changes have occurred on the trained staff owing to the fact that we are dependent on temporary sisters.

There were 65 admissions of babies and 27 mothers. This involved 1,941 test feedings, 2,606 complementary feedings, and 7,939 artificial feedings for babies, and for mothers 221 treatments for restoration of breast feeding and special instructions to each mother.

TOOWOOMBA HOME TRAINING SCHOOL.

This school is also for the training as Child Welfare Assistants of previously untrained girls from the age of 16 years upwards. The training school is growing and trainees are showing a keen interest in the care of the babies and toddlers. Four girls were successful in the examination for child welfare assistants held in December, 1948. They were presented with certificates by the Minister for Transport, the Hon. J. E. Duggan, M.L.A., at the first graduation ceremony to be held at the Home, on 17th December, 1948; 14 trainees are in training at present, of which 8 are being prepared for examination in December, 1949, and 6 for June, 1950.

With the growth of the training school, extra trained staff is necessary for constant supervision, and an extra sister was added to the staff to allow the senior sister to assist with tutor work.

Dr. G. V. Hickey, senior, has relieved Dr. G. V. Hickey, junior, as Honorary Medical

Officer and Part-time Lecturer for the greater part of the year because of Dr. Hickey's, junior, absence in Melbourne. In addition to doctor's and matron's lectures, lectures on the pre-school child have been given by Miss A. Clark.

MATERNAL AND CHILD WELFARE HOME, SANDGATE.

This year, a record of 600 children were admitted, representing 222 families; 20 of these families returned during the year and 16 families from previous years. The year began with 36 children from 17 families in residence. The ages of the children were—

	Boys.	Girls.
Under 5 years	182	153
Between 5 and 10 years	114	101
Over 10 years	27	23

In every age group boys have outnumbered girls. As will be noticed, most of the children are under 5 years of age—of these the majority are under 3 years.

A number of these young children are still on bottle feeding when admitted and some also have dummies. As a rule, they are difficult for a time as they have to be weaned, taught to eat normal food and drink milk from a cup. They usually lose weight during the first week, but later do very well. Teething difficulties are often met with in these cases. The older children when admitted have colds and sores of all kinds and in some cases heads infested with pediculi. These are treated and usually respond to general routine treatment.

Forty-five children were sent to hospital during the year. Of these 20 were sent in August, when an outbreak of chicken pox occurred in the home. Twenty children were returned to the home from hospital, the others being discharged to their homes.

Many improvements have been carried out in and around the Home during the year. Staff quarters have been completed and the nursing staff is now comfortably housed. The back veranda of the Home has been enclosed with windows and the children's playground has been fitted with suitable toys to assist in the entertainment and development of the children. The windows and doors of the dining-rooms and kitchen have been fitted with wire gauze to make these rooms flyproof. The area under the Home has been given a layer of bitumen. The grounds have been improved, most of the lawns being now interspersed with garden surrounded by stones and cement.

On 16th May the Baby Home was opened, one baby being admitted on the day of opening. By the end of June four babies had been in residence.

The nursing staff has also undergone many changes during the year, and with the advent of the opening of the baby home additional staff was engaged. A reliable and workable staff is now employed.

CENTRES FOR EXPECTANT MOTHERS OR ANTENATAL CLINICS.

During the year total blood counts were carried out on 167 patients at their first attendance at the clinics, usually during the third or fourth month of pregnancy. Eighty patients had a second blood examination during the eighth month of pregnancy. These figures do not include those expectant mothers at present under supervision.

Of the 167 patients examined, 10.8 per cent. had haemoglobin values *below* 10.7 gm. per 100 c.c. (70 per cent.), which is regarded as the lower limit of normal in pregnant women.

Thirty-five point seven per cent. of patients had red cell counts below 4,000,000. the physiological normal in pregnancy. However, of the 80 patients who had a second blood count during the eighth month of pregnancy, 61.2 per cent. showed improvement on their first counts, in spite of the increasing hydraemia which occurs in the later months of pregnancy. This improvement can be credited to improvements made in the patients' diets and to iron and liver therapy.

There still appears to be considerable ignorance among expectant mothers of what constitutes a balanced nutritional diet during pregnancy and much educational work is required on this subject.

One hundred and sixty-six patients were examined for the Rh factor and of these 140 or 84.3 per cent. were Rh+ve and 26 or 15.7 per cent. were Rh—ve. When indicated and possible, the husband was also examined for the Rh factor.

The Rh—ve patients were checked at intervals during their pregnancy for the presence of Rh antibodies in their serum. Of the 26 Rh—ve patients, two showed considerable antibody titres. The first mother, a para 9, showed a rise in titre from 120 to 1,000. Labour was premature, the baby had *hydrops foetalis* and died shortly after birth. The second mother, a para 1, had a rise in titre from 4 to 32. The baby developed *icterus gravis* but survived and made satisfactory progress. The first child of this mother was a mongol.

A third mother, para 4, showed a trace of antibody only and gave birth to a normal healthy child.

The following is a table showing some of the abnormal conditions detected at the antenatal clinics during the year:—

Toxaemias	6
Hypertension	14
Pyelitis	4
Threatened abortion	4
Hydramnios	3
Positive Wasserman	3
Mal-presentation	3

In addition, there were numerous cases of varicose veins, dental caries, neuritis, cramps, and constipation.

Attendances for the year ending 30th June, 1949, were as follows:—

Fortitude Valley	519
Woolloongabba	480
Caboolture	104
Herschell Street	46
Nundah	15
West End	24
Talks to Mothers	72
Total Attendances	1,260

Metropolitan antenatal clinics remain much the same in attendance, and individual talks to expectant mothers are given regarding diet, exercises, baby's clothes, and patterns.

CORRESPONDENCE SERVICE FOR EXPECTANT MOTHERS.

The correspondence service for expectant mothers has greatly increased, and with the co-operation of the secretaries of the hospitals who send monthly lists of hospital bookings we are able to contact mothers while they are in the country, before they come to the country towns and hospitals. This correspondence is greatly appreciated, as a great number of letters are received for further advice and later telling of the safe arrival of baby and thanking us for the advice given.

Mothers from other countries and new arrivals in Queensland are anxious for advice regarding what is most suitable for the climate and request patterns of baby's clothes.

Many requests are received from doctors in country towns, students, and hospitals for copies of the "Expectant Mother" booklet, and 1,672 have been supplied to them for distribution to their patients.

Circular letters forwarded to expectant mothers	4,185
Response to circular letters	1,176
Circular letters forwarded to expectant mothers (other than above) re "The Expectant Mother" book	1,536
Serial letters to expectant mothers	6,595
Special letters of advice sent on request	188
Copies of "The Expectant Mother" sent on request	1,095
Copies of baby patterns sent on request	99
Copies of other patterns sent on request	29
Copies of special exercises sent on request	90

DIRECTOR'S CONSULTANT CENTRE.

During the year a number of infants and toddlers whose feeding or management had proved difficult were referred to the Director by sisters in charge of metropolitan and country centres or by private medical practitioners.

Children for admission to Sandgate Maternal and Child Welfare Home, and Red Cross Home, Margate, were examined and throat swabs taken.

Attendances for the year ending 30th June, 1949, were as follows:—

Number of children examined for admission to Sandgate Home	666
Number of children examined for admission to Margate Red Cross Home	348
Attendances at Director's Consultant Centre for advice	1,859
Total number of children examined or advised at centre	2,873

TODDLERS' CENTRES FOR THE PERIODIC EXAMINATION OF CHILDREN BETWEEN THE AGES OF 1 AND 5 YEARS (PRESCHOOL AGE).

At the 15 centres, 7 kindergartens, and 1 home, children from the age of 1 to 5 years were examined by the Director, Deputy Director, and Dr. Mathewson.

The total number of examinations made during the year numbered 3,339, of which 1,531 were first examinations and 1,808 were subsequent examinations; examinations during the previous year numbered 1,261 first examinations and 2,159 subsequent examinations, making a total of 3,420.

In the last year's report it was thought a greater number of children would benefit from half-yearly examinations instead of quarterly, as had been practised. It is interesting to note that this has proved so, 270 more children being examined under this practice.

Attendance at clinics is variable—some clinics have a very small attendance, whilst at others attendances are so large as to allow insufficient time for examination. During the year kindergartens have reduced their attendances considerably; consequently, about 100 less children were examined there. Strikes, wet weather, and epidemics of influenza and chicken pox prevented many children from attending the clinics.

New centres were opened at Stones Corner on 24th September, at Bulimba on 6th October, Graceville on 20th October, Hamilton on 4th October, Kedron on 8th October, and at Mitchelton on 4th March. These centres are relieving the parent centres considerably and mothers from these districts have expressed their appreciation of having toddlers' centres in their district.

All toddlers' clinics were closed during the Christmas vacation.

It was noticed that children who had the benefit of kindergarten training were much more amenable to examination than those who had only home environment.

A number of children over 3 years of age had chalky or decayed teeth, many over 4 years had teeth extracted, and only a few had teeth filled. Many children had enlarged tonsils and adenoids and quite a few had infected tonsils.

A large number of children under 2 years of age had bow legs, but in the majority of cases their legs straightened spontaneously. Flat feet were found in a number of children under 2 years, but the wearing of specially built-up shoes and carrying out of feet exercises corrected the majority of cases; few had to be referred to orthopaedists.

The prevalence of significant degrees of knock knee among toddlers was very striking. As the aetiology of this condition appears to be as yet imperfectly understood, it was decided that a survey of these cases should be undertaken and all significant data recorded. The survey is intended to cover at least 1,000 cases of this condition. The survey commenced in March, 1949, and is progressing satisfactorily. In the meantime, the milder cases are being treated with specially wedged boots and suitable exercises are prescribed. The diet and posture are also corrected when found at fault. Severer cases are referred to orthopaedic specialists.

In children over 2 years poor posture is frequently noticed, retracted chests and protruberant abdomens being the main cause. Blood counts were found necessary in many cases. Many rectal swabs for detection of ova and specimens of urine for microscopic examination were sent to the Health Laboratory.

CORRESPONDENCE SECTION.

There has been a slight decrease in the total number of birth notifications received. Less No. 3 follow-up circulars have been forwarded to mothers each month, which would indicate that mothers must be attending centres in the country in response to the first circular. A slight decrease in the number of letters written

regarding feeding and management is shown, but more letters of thanks and appreciation of birthday cards sent to babies whose mothers have corresponded regularly have been received.

The New Guinea and Northern Territory correspondence has increased somewhat and grateful mothers who are passing through Brisbane on long leave never fail to bring their babes along to visit the correspondence sister. Most of the mothers in Lae have ceased to write as they are now able to take their babes along to the General Hospital there. Just recently a sister who has a Maternal and Child Welfare Certificate was appointed to the staff, and she has been able to weigh the babes and give satisfactory advice. Copies of the book "Care of Mother and Child" and other literature have been forwarded to the hospital in Lae for distribution.

Numerous requests for copies of "Care of Mother and Child" have been received from country doctors and hospitals, a total of 953 being supplied. Letters in response to newspaper articles continue to arrive regularly, including some from mothers of toddlers with knock knees and flat feet. They are very grateful to have exercises and diagrams for building up shoes forwarded to them. All these cases are advised to either see their own doctor or, when in Brisbane, to visit a toddler's clinic for further advice if necessary.

Where stocks of dried milk, &c., are unobtainable in country districts arrangements are made for same to be forwarded C.O.D. from Brisbane through our correspondence service.

Number of birth notifications received ..	3,523
Number of circular letters posted—	
(1) within reach of centre	1,549
(2) not within reach of centre	1,974
Number of follow-up circular letters posted	2,341
Visits to centres in response to circular letter No. 1	696
Letters to correspondence section in response to circular letter No. 2 ..	584
Letters of advice <i>re</i> feeding and management sent on request	1,549
Number of "Care of Mother and Child" books sent on request	714
Number of birthday cards posted ..	249

SOCIAL WELFARE OR HOME VISITING SERVICE.

The number of premature and frail babies brought to notice has increased during the past year, the majority of which come from poor homes, housing camps, and parents living in rooms. Lack of help in the homes, especially where there are several other young children, must also play a part in prematurity. In many cases the premature babe does not bring the happiness one would expect, as the mother feels she is unable to cope with the added work and responsibility of a premature infant.

Breast Feeding.—Numbers of premature babes are weaned before being discharged from hospital or soon after arriving home. The mother is often discharged before the babe; she takes up her household duties and is expected to go to the hospital each day, irrespective of the distance from her home, with her expressed milk. This often proves too much for the mother; consequently, by the time the babe comes home, the milk supply has diminished. This result, coupled with the fact that the babe has not been taught to take the breast, further distresses the mother and artificial feeding results.

Where necessary, admission to our homes has been recommended if there is a vacancy and mothers greatly appreciate this service. In other cases, when there are numbers of other children, the mother is not able to take this advantage because of her inability to obtain help in the home. These are the cases to whom two or three weekly visits for test feeding and advice have been made. The mothers eagerly await the visits from the sisters, as they assure them that they derive a great deal of help from the advice given and from having someone who understands their problems to talk to and confide in. When the babe is doing well and gaining satisfactorily the mother is advised to attend a centre.

Other cases have been visited for a longer period. In one instance a mother with five children under the age of 5 years, including twin babies, has been visited regularly for six months, as she is without relatives in Brisbane and finds it utterly impossible to attend a centre. Others in similar circumstances have been visited less frequently and have managed to carry on. Most mothers are very interested and do their best, often under appalling conditions, to carry out the advice given. Cleanliness is the hardest thing of all to instil into some mothers.

The number of sets of twins has increased during the past year, again calling for much patience and hard work on the part of many already overworked mothers, who often have several other children.

Number of newborns visited in public hospitals	7,744
Number of newborns visited in private hospitals	1,017
Number of newborns visited at home ..	298
Number of cases visited for test feeds and advice	1,046
Number of test feeds—cases	120
Number of test feeds—feeds	200

LECTURE DEMONSTRATIONS TO SCHOOL GIRLS.

The mothercraft teaching, in the primary and secondary schools, is much the same as in previous years. Classes were held in most of the Primary Domestic Science Schools in the metropolitan areas. The pupils from outside schools attend the large centres and thus a large number of girls receive tuition. Classes were also held in the State Secondary Schools, and in addition a course of lessons was given at Moreton Bay High School and Ipswich Technical College. By request from the head teacher of Cannon Hill School, lessons were given at the school this year for the first time.

At the conclusion of the course, which consists of eleven lessons, an examination was held in each school.

Towards the end of the school year a short function was arranged, when a senior member of the Maternal and Child Welfare Service visited the schools, gave the girls a short address, and presented a certificate to each successful pupil. A prize was also presented to the girl who had gained highest place in the examination and to the one who had made the best mothercraft book. The girls on the whole show great interest, which is evident not only by their attention to the lessons, but also by the work which is done in compiling their mothercraft scrapbooks, some of these books being works of art.

Thanks are due to the principals, headmasters, and teachers of the various schools, who, by their co-operation in allotting a suitable time for the Mothercraft lessons, have made the work possible, and also for their interest, which greatly adds to its success.

Out of a total attendance of 790, 694 children sat for the examination. Of this number, 630 gained certificates.

KINDERGARTEN AND KINDERCRAFT TRAINEES.

Lectures were given to the trainees by Dr. T. H. R. Mathewson on "Child Development," "Infections," and "Rashes," and the Superintendent and Deputy Superintendent gave lectures on "Nutrition."

MEDICAL STUDENTS.

During the year Dr. Mathewson lectured fourth-year medical students on Maternal and Child Welfare.

Four lectures to each of three groups of fifth-year medical students were also given by Dr. Mathewson. These lectures dealt with "Child Development," "Breast or Natural Feeding," "Difficulties associated with Breast Feeding which may lead to Premature Weaning," and "Artificial Feeding."

Demonstrations of normal healthy babies were given at the Brisbane Women's Hospital, and visits to the Maternal and Child Welfare Centre, Fortitude Valley, and the St. Paul's Terrace Home were also made.

NEWSPAPER ARTICLES.

During the year a copy of an article on some aspect of Maternal and Child Welfare work has been sent each month for publication to sixty-five newspapers in the State, including the "Queensland Agricultural Journal" and the "Queensland Dairyfarmer." The titles of the articles were:—"Parents and a Child's Obedience," "Care of the Nursing Mother," "Forming Good Sleeping Habits for Baby," "The Right Way to Bath Your Baby," "Use Common Sense in Baby Feeding," "Sun Bath—don't Sun Burn Your Baby," "The Crying Baby," "When Should Baby Do Things (Talking)," "When Should Baby Do Things (Standing and Walking)," "Intoeing Gait, Bow Legs and Knock Knees in Toddlers," "The Battle of Food in Early Childhood," "The Baby's Need for Mothering."

PUBLICATIONS OF THE SERVICE.

Requests for "The Expectant Mother" and "Care of Mother and Child" are being continuously received, not only from mothers who attend the centres, and those who avail themselves of the correspondence service but also from hospitals and doctors.

Sixteen thousand copies of "Care of Mother and Child" and 9,500 copies of "The Expectant Mother" were published.

The booklet of "Antenatal and postnatal Exercises" has been rewritten, is in process of printing, and is well illustrated by photographs of models doing the actual exercises.

PUBLICITY.

Our exhibit, housed in the Health Pavilion at the showgrounds, attracted a considerable number of people at the last Royal National Show.

STAFF.

Dr. G. Reid, a graduate of Aberdeen University, was appointed Deputy Director on 28th October, 1948.

The nursing staff of the Service now numbers 106, representing an increase of 7 on the figures for 1947-48. Sisters were appointed to Ingham and Mount Isa centres, which were opened during the year as resident centres. Three assistants were appointed to the permanent staff and nine assistants were appointed to sister in charge positions.

Three sisters resigned from the permanent staff because of approaching marriage and one other resigned for domestic reasons. One permanent sister was transferred to the School Health Services and one overage officer was retired in January, 1949, after remaining on the staff in a temporary capacity for a length of time. Several temporary sisters also resigned.

Three senior officers went on extended leave of absence during the year.

In November, 1948, Miss A. Jenkinson was appointed as Acting Deputy Superintendent, and has now commenced an inspection tour of the State.

Despite the increase in the staff the overall position as far as staff is concerned has become gradually worse, due to the establishment of new centres and subcentres, and much difficulty has been experienced over the last twelve months arranging for recreation for our country staff. In some districts the centres have had to be closed for short periods as no reliever could be obtained. This breaks the continuity of the service given and every possible avenue is explored to avoid this. The staff, both temporary and permanent members, have been most co-operative in this matter, some to the extent of offering to take less leave. Annual leave is important in maintaining the health and efficiency of the staff.

The number of staff now totals 106, and of this number 56 are in temporary positions, being unable to accept permanent appointments for domestic reasons. Of this 56, 30 are in the metropolis and 26 in the country. This service gives a great deal of satisfaction to the nurse who is interested in child welfare work, but it also demands a great deal from its staff. The sisters must have the basic knowledge of all branches of nursing to thoroughly understand and give of their best to the work that maternal and child welfare covers and be prepared to help mothers with their many problems, showing interest and the desire to help in each case. The sisters deserve a great deal of credit in the way they have maintained the high standard of the Service under conditions of continual arduous travel, causing broken hours of rest, indifferent and expensive living accommodation, and some centre accommodation is far from adequate for satisfactory work. All these conditions tend to lower standards. The appreciation that is expressed and shown by the mothers who have received help, and the knowledge that these

defects will be remedied as soon as possible, is an encouragement to the staff to keep on with the excellent work they are doing.

BABY CLINIC SOCIAL CLUB.

During the year nine meetings were held, two of these being in the form of a graduation ceremony for the successful nurses at the Maternal and Child Welfare Examination, one a dinner party at Anzac House, and three being the quarterly lecture meetings.

Two very interesting lectures were delivered to members of the Club—one in September, given by Dr. A. Paterson, was entitled “Allergies of Childhood,” and Dr. P. A. Earnshaw presented his subject on “The Cry of the Infant” in March. In June, films on “Child Development” and “Diet,” supplied by the Queensland Health Education Council, were shown. All lectures were much appreciated and copies were sent to country centres.

From the secretary of “Save the Children” particulars have been received of the club’s adopted child. She is Marion Saunders, aged 7 years. The club sent a Christmas parcel to Marion through the Commonwealth Bank.

Quarterly newsletters were posted to country members and some country members attended the monthly social while in Brisbane on leave.

TABLE LXXIV.

VISITS TO NEWBORNS, SUBSEQUENT AND TOTAL VISITS.

Year.	Visits to Newborns.	Subsequent and other Visits.	Total Visits.
1946-1947	23,611	3,032	26,643
1947-1948	22,875	2,916	25,791
1948-1949	22,912	2,396	25,308

ATTENDANCES AT CENTRES.

Number of New Cases seen at the Centres.

—	1946-47.	1947-48.	1948-49.
Infants—			
Under one year ..	17,906	17,091	18,083
One to two years..	4,020	4,568	4,574
Over two years ..	2,613	2,113	2,234
Total ..	24,539	23,772	24,891
Expectant mothers..	1,120	1,122	997
Total new cases	25,659	24,894	25,888

ATTENDANCES OF INFANTS AND CHILDREN AT MATERNAL AND CHILD WELFARE CENTRES AND SUB-CENTRES.

Metropolitan.

—	1946-47.	1947-48.	1948-49.
Fortitude Valley ..	25,494	28,412	24,381
Branches—			
Caboolture ..	1,047	792	910
Clayfield ..	2,914	2,775	2,186
Dayboro’ ..	465	320	361
Enoggera ..	1,424	1,338	2,118
Hamilton ..	2,088	1,922	1,498
Hendra ..	1,753	1,591	1,612
Newmarket-Grange	1,395	1,523	1,381
Windsor ..	2,813	2,515	2,846
	39,393	41,188	37,293

Metropolitan—continued.

—	1946-47.	1947-48.	1948-49.
Herschell Street ..	17,767	19,650	18,356
Branches—			
Ashgrove ..	4,366	4,005	3,501
Auchonflower ..	964	887	752
Bardon ..	1,624	1,864	1,990
Corinda ..	2,428	2,437	2,936
Graceville ..	2,323	2,376	2,230
Indooroopilly ..	1,710	1,549	1,452
Kelvin Grove ..	1,434	1,991	1,988
Paddington ..	2,350	1,760	1,792
Rosalie ..	1,878	2,183	1,892
St. Lucia ..	617	619	503
Toowong ..	2,528	1,927	2,114
	39,989	41,248	39,506
Nundah ..	4,096	5,574	5,446
Branches—			
Cribb Island ..	294	283	251
Kedron ..	3,916	3,382	3,142
Redcliffe ..	2,277	2,565	2,359
Sandgate ..	4,525	4,522	4,463
Zillmere ..	225	339	316
Geebung (opened 5-10-48)		..	228
	15,333	16,665	16,205
West End ..	9,079	8,760	9,601
Woolloongabba ..	23,833	24,180	20,275
Branches—			
Beenleigh ..	..	517	641
Bulimba ..	1,833	1,686	1,861
Camp Hill..	2,124	1,701	1,884
Ekibin ..	712	876	970
Holland Park ..	1,857	1,631	2,156
Holland Park T.H. Establishment ..	339	1,045	951
Ipswich Road ..	1,856	2,130	2,460
Morningside ..	1,480	1,566	1,568
Rocklea T.H. Es- tablishment ..	175	1,042	1,029
Salisbury ..	823	1,019	973
Stones Corner ..	980	992	638
Yeronga ..	1,110	1,358	1,551
	37,122	39,743	36,957
Wynnum ..	7,647	7,715	7,399
Branches—			
Cleveland (opened 29-6-48)		..	519
	7,647	7,715	7,918
Country.			
Atherton ..	1,907	2,022	1,913
Branches—			
Herberton..	425	440	333
Malanda ..	446	527	646
Millaa Millaa ..	873	741	912
Ravenshoe ..	597	810	779
Tarzali (opened 5-11-48)		..	37
Yungaburra (from Oct. 1947)		183	324
	4,248	4,723	4,944
Barcaldine ..	1,926	1,468	1,376
Branches—			
Aramac ..	870	614	516
Longreach ..	1,678	1,645	1,290
	4,474	3,727	3,182
Biloela ..	428	2,332	2,374
Branches—			
Baralaba ..	10	533	419
Goovigen ..	25	210	306
Jambin (opened 26-7-47)		106	176
Moura (opened 29-7-48)		..	162
Thangool ..	69	431	537
Theodore (opened 7-8-47)		237	463
Wowan ..	42	415	659
	574	4,264	5,096

Country—continued.

—	1946-47.	1947-48.	1948-49.
Bowen	2,307	2,775	2,401
Branches—			
Collinsville ..	1,181	1,096	1,448
Proserpine ..	1,407	1,414	1,374
	4,895	5,285	5,223
Bundaberg	8,846	8,198	7,682
Branches—			
Gin Gin (opened 4-8-47)		238	322
	8,846	8,436	8,004
Cairns	8,160	8,708	8,997
Branches—			
Edge Hill ..	926	1,039	987
Edmonton ..	521	453	229
Gordonvale ..	1,353	1,060	1,131
Kuranda ..	153	93	222
Mossman ..	1,136	1,008	1,030
	12,249	12,361	12,596
Charleville ..	2,117	3,426	2,966
Branches—			
Cunnamulla ..	617	755	780
Quilpie ..	387	618	598
	3,121	4,799	4,344
Charters Towers ..	3,205	3,561	3,095
Dalby	3,757	4,447	4,603
Branches—			
Chinchilla ..	1,329	1,984	1,938
Miles ..	532	671	834
	5,618	7,102	7,375
Emerald	1,232	1,234	1,540
Branches—			
Alpha ..	154	122	137
Blackall ..	1,171	1,030	1,089
Blair Athol ..	186	169	251
Capella ..	41	142	199
Clermont ..	1,436	1,002	830
Jericho ..	72	14	27
Springsure ..	932	722	792
	5,224	4,435	4,865
Gayndah	1,033	903	702
Branches—			
Eidsvold ..	474	242	182
Monto ..	1,327	1,383	969
Mundubbera ..	749	659	572
	3,583	3,187	2,425
Gladstone ..	3,181	4,016	4,170
Branches—			
Calliope ..	247	239	262
Miriam Vale ..	276	344	378
Mt. Larcom ..	731	661	888
	4,435	5,260	5,698
Goondiwindi ..	1,548	1,856	1,395
Branches—			
Dirranbandi ..	224	294	259
Inglewood ..	349	618	614
Texas ..	609	557	476
Yelarbon ..	377	363	444
	3,107	3,688	3,188

Country—continued.

—	1946-47.	1947-48.	1948-49.
Gympie	5,877	6,349	6,164
Branches—			
Cooran ..	191	281	243
Imbil ..	221	403	355
Kandanga ..	165	79	140
Pomona ..	406	416	467
	6,860	7,528	7,369
Ingham (from 16-8-48)		..	1,479
Branches—			
Cardwell (opened 17-9-48)		..	207
Halifax (opened 14-9-48)		..	548
	..	..	2,234
Innisfail	4,237	4,509	5,304
Branches—			
Babinda ..	1,683	1,203	1,060
El Arish ..	167	87	140
Mourilyan ..	200	219	227
Silkwood ..	211	261	328
South Johnstone ..	526	339	256
Tully ..	1,906	1,661	1,675
	8,930	8,279	8,990
Ipswich	11,795	12,146	12,884
Branches—			
Boonah ..	1,036	1,168	1,345
Esk ..	754	763	871
Laidley ..	784	751	1,101
Lowood ..	252	158	308
Rosewood ..	720	800	1,466
Somerset Dam ..	130	107	434
Toogoolawah ..	990	849	1,141
	16,461	16,742	19,550
Kingaroy	3,664	3,414	3,316
Branches—			
Kumbia ..	336	191	247
Nanango ..	1,438	1,077	995
Yarraman ..	367	224	440
	5,805	4,906	4,998
Mackay	8,606	10,537	9,837
Branches—			
Finch Hatton ..	283	372	389
Koumala ..	308	256	450
North Mackay ..	824	1,255	1,488
Sarina ..	916	974	876
	10,937	13,394	13,040
Mareeba	2,642	3,843	3,949
Branches—			
Dimbulah ..	650	734	1,125
Mt. Mulligan ..	435	488	534
Yungaburra (to Oct., 1947) ..	327	104	..
	4,054	5,169	5,608
Maryborough ..	9,424	8,910	7,744
Branches—			
Biggenden ..	1,186	1,167	1,064
Childers ..	903	855	780
Howard ..	1,168	726	723
Pialba ..	1,226	870	731
	13,907	12,528	11,042
Mount Isa (opened 10-1-49)		..	1,199
Branches—			
Camooweal (opened 14-6-49)		..	16
	..	..	1,215

Country—continued.

—	1946-47.	1947-48.	1948-49.
Murgon	1,205	1,450	1,368
Branches—			
Goomeri	881	737	789
Hivesville (opened 5-1-48)	61	105	105
Kilkivan	305	308	253
Proston	215	200	228
Wondai	960	1,209	1,225
	3,566	3,965	3,968
Nambour	4,648	4,922	4,774
Branches—			
Buderim	54	159	180
Caloundra	459	628	710
Cooroy	981	1,124	1,282
Eumundi	184	133	201
Landsborough (opened 7-10-47)	125	179	179
Maroochydore ..	533	567	449
Palmwoods	406	390	294
Yandina	191	205	290
	7,456	8,253	8,359
Railway Car—			
Winton	614	685	729
Cloncurry	263	483	597
Dajarra	92	116	84
Hughenden	914	1,039	992
Julia Creek	228	215	410
Kajabbi	54	36	29
Mt. Isa (to 10-1-49)	1,079	1,296	622
Richmond	336	374	421
	3,580	4,244	3,884
Rockhampton ..	14,710	14,836	17,595
Branches—			
Mt. Morgan	1,209	1,710	1,911
Ogmore	581	366	445
St. Lawrence	170	195	361
Yeppoon	921	993	1,152
	17,591	18,100	21,464
Roma	2,329	2,939	2,603
Branches—			
Mitchell	1,249	1,202	1,222
Wallumbilla	92	209	265
Yuleba	123	198	270
	3,793	4,548	4,360

Country—continued.

—	1946-47.	1947-48.	1948-49.
Southport	4,402	4,757	3,819
Branches—			
Beaudesert	1,528	1,423	1,399
Beenleigh	546	..	..
Burleigh Heads ..	546	467	473
Coolangatta	3,026	3,208	2,665
	10,048	9,855	8,356
Toowoomba	9,687	10,272	11,433
Branches—			
Clifton	378	379	342
Crow's Nest	367	450	560
Forest Hill	149	146	157
Gatton	883	1,337	1,518
Oakey	591	781	1,069
Pittsworth	738	802	834
	12,793	14,167	15,913
Townsville	13,541	14,485	13,462
Branches—			
Ayr	2,760	3,307	4,286
Giru	305	429	483
Home Hill	2,031	2,235	2,207
Ingham (to 15-8-48)	1,338	1,928	124
	19,975	22,384	20,562
Warwick	3,154	3,974	3,893
Branches—			
Allora	382	645	591
Killarney	371	507	509
Stanthorpe	1,603	2,410	2,378
	5,510	7,536	7,371

TOTAL ATTENDANCES OF INFANTS AND CHILDREN AND EXPECTANT MOTHERS.

1946-1947.	1947-1948.	1948-1949.
370,946	396,380	392,010

TABLE LXXV.
ANTENATAL CLINICS.

	New Cases.	Attend- ances.	New Cases.	Attend- ances.	New Cases.	Attend- ances.
	1946-47.		1947-48.		1948-49.	
Fortitude Valley	109	636	111	618	72	519
Woolloongabba	131	700	111	664	92	480
Caboolture	20	139	27	162	19	104
Herschell Street	27	42	21	60	16	46
Nundah	4	11	2	7	3	15
West End	13	31	12	21	12	24
Redcliffe (opened March, 1947, and closed December, 1947	5	10	2	19	..	..
Wynnum (closed March, 1948) .. ..	..	..	..	1	..	..
	309	1,569	286	1,552	214	1,188

SCHOOL HEALTH SERVICES.

P. R. PATRICK, M.B., B.S. (Qld.), Chief Medical Officer; L. M. ARCHIBALD, M.B., B.S. (Qld.), Medical Officer; E. W. HAENKE, L.D.Q., Chief Inspector, School Dental Services; E. O. MARKS, M.B., Ch.B., B.A.O. (Dubl.) Part-time Ophthalmic Officer.

The year 1948-49 has been one of progress in School Health work in Queensland. In addition to the maintenance of routine work in the medical and dental sections of the Services, three important events occurred to justify this claim. They are—firstly, the publication by the Queensland Health Education Council of the handbook for teachers “Subject: Health” for the instruction in health of primary school pupils; secondly, the official approval for the use of hired transport by school sisters and dentists to visit schools away from railway centres; and thirdly, the commencement at Ipswich Railway Workshops of a new rail dental clinic.

STAFF.

Medical Section.—Despite the general nursing shortage throughout the State it has been possible to keep sisters stationed in all centres. During the first half of 1949 there has been one vacancy in the Cairns and Rockhampton areas, but new appointments have been made and these sisters will soon be taking up duty there. It has not been possible to appoint medical officers, there being no applicants for the position when advertised. This leaves medical examinations incomplete, as trained nurses cannot perform a complete medical examination.

Dental Section.—The dental staff has remained at approximately the same strength, there being one resignation and two new appointments.

At the end of the year 1948-49, the staff consisted of:—*Field Staff:* Chief Medical Officer, 1 full-time medical officer, 1 part-time medical officer, 1 part-time ophthalmic officer, 1 senior sister and 19 school sisters, Chief Dental Inspector of Schools, 20 dental inspectors.

ROUTINE MEDICAL EXAMINATIONS.

During the year 78,449 children were examined by the medical staff. In the metropolitan area the majority of children suffering with defects were examined by the Chief Medical Officer before the parents were notified. Full medical inspections were carried out by the Chief Medical Officer at schools in the Redland Bay, Samford, and Dayboro areas and many other small schools outside the metropolitan area. In Ipswich the part-time medical officer again rendered valuable service by examining at schools and assisting the school sister for the area. In other country areas the medical examinations have been performed by the nursing staff, who were advised on local problems by the Chief Medical Officer; 408 visits were paid to homes by school sisters and problems discussed with the parents.

EXAMINATIONS AT SCHOOLS NOT ON RAILWAY LINES.

Official approval was given during the year for members of the medical and dental staffs to hire private transport to visit schools not accessible by public transport. This was a most important step in the expansion of the Service.

By this means children are now being examined by nurses and dentists at schools which before were unfortunately bypassed. Under this new scheme it will be possible for all children in Queensland to be examined by school nurses once in approximately every two years. The dental staff at present, however, is not large enough to permit dental examination of all school children but under this new system many more country children are being examined and treated than before. The Table below sets out the number of children examined at “off the line” schools since the beginning of 1949:—

	Dentally.	Medically.
Number of “Off the Line” Inspected Schools	94	202
Number of Children Examined at above	2,536	4,317

SCHOOL BUILDINGS.

During the year two new schools were opened in the metropolitan area, one at Stafford and one at Wynnum. The lighting and ventilation of these schools are excellent and the provision of a medical room is a welcome addition. The medical staff have continued the inspection of sanitation at all schools visited and where necessary defects have been reported. Despite labour and material shortage these are attended to by the Public Works Department in reasonable time.

COMMUNICABLE DISEASES IN SCHOOLS.

During the year 1948-49 the schools have been relatively free of communicable diseases. During the winter months of 1948 the influenza epidemic caused absenteeism amongst the school children, and during May and June, 1949, whooping cough was fairly prevalent. Otherwise communicable diseases have caused little concern. Scarlet fever occurred sporadically throughout the year and there were some cases of chicken-pox. So far in 1949 measles (morbilli) has not shown itself and information received during medical examination shows that the majority of the children, even in the younger grades, have already had the disease, probably during the extensive epidemic of 1947. It therefore seems unlikely that morbilli will cause schools much trouble during 1949.

School Health Services again assisted the Brisbane City Council in diphtheria immunization at schools. During 1948, the Chief Medical Officer carried out this work at schools in the absence of a city medical officer. For the year 1948-49, 852 children were immunized at Brisbane schools. This number is much less than the previous year due to a high proportion of the children being immunized in early life.

The total number of diphtheria cases amongst Queensland children of school age for the year was 42; of these 38 occurred outside Brisbane, 10 among children attending Townsville

District schools, and 14 in the Maryborough-Bundaberg area schools. From figures reported by school sisters when examining schools it is revealed that the percentage of school children immunized was the highest in Brisbane and lowest in the Maryborough-Bundaberg area. Although the number of cases is small, it would appear that the incidence in school population is inversely proportional to the percentage of immunized children.

ALTERATION TO THE EXCLUSION TABLES.

The proposed alterations to the Regulations governing the exclusion of children suffering from, and contacts of, communicable diseases were agreed to by the Department of Public Instruction and came into force in August, 1948. The exclusion times were revised in accordance with the latest knowledge regarding the infectivity of the various diseases. In most cases where alterations were made the exclusion times were shortened.

HEALTH EDUCATION.

It has been truly said that "the most important phase of health in education is education in health." Health is influenced by habits, and youth is the time of habit formation. School provides the kind of training that is needed for habit formation and can help tremendously towards improving the health of the community. The beliefs stated above were kept in mind in the preparation of the handbook for teachers—"Subject: Health"—which was published during the year by the Queensland Health Education Council. This publication contains subject matter for health talks to all grades in primary schools and has been received favourably by both teachers and the medical profession. It is hoped by the aid of this book that the teacher will be able to instruct the child in correct health habits, and by so doing educate the people of Queensland towards healthful living.

ANTHROPOMETRICAL SURVEY.

Measurements of heights and weights of primary school children are at present being taken throughout Queensland in all the main centres. The result of this survey will be used as standards for Queensland children and also to determine the effects of climate on the height and weight of school children. Comparison with figures compiled by workers earlier in this century should prove of interest. At present the survey has been completed at Toowoomba, Ipswich, Mackay, and Cairns.

PHYSICAL EDUCATION.

During the year two school camps were held by the Physical Education Branch of the Department of Public Instruction, when children from Goodiwindi and Roma districts were brought to the National Fitness Council Camp at Burleigh Heads. At both these camps School Health Services Branch assisted by the attendance of a school sister.

It is understood that the report of the posture survey made by the Physical Education Department in 1948, and in which this Department assisted, is almost completed. Its publication is awaited with interest.

Arrangements have been made to enable a demonstrator and senior students of the Physiotherapy Department of the University to accompany school medical officers once a week and help in the examination of school children for postural defects.

HOOKEWORM CAMPAIGN.

The hookworm campaign at Cairns and Innisfail was again assisted by School Health Services nurses, who combine these duties with their routine school work at those centres.

SPECIAL SCHOOLS.

The School for the Blind and Deaf.—There was an increase in the number of deaf children enrolled at this school, there now being over 200 children attending the school. While there were more cases of "rubella" children admitted, they were all from the 1938 and 1941 epidemics. There was no evidence of cases due to infection in later years.

During the year the Commonwealth Acoustic Laboratory commenced work in Brisbane and has tested many children referred by School Health Services for deafness. In the future it is hoped that with the aid of a portable audiometer supplied by the Commonwealth Acoustic Laboratory all children will be given an audiometric test as a routine. At present all children are tested by the whispered voice and the ticking of a watch, which are rough tests only.

The number of blind children enrolled although showing a slight increase is still under 20.

The Opportunity School and Grades.—The general teacher shortage is affecting these classes as in other schools. At Dutton Park School and the metropolitan grades at Petrie Terrace, Sandgate, and the Valley schools medical inspection was performed by the Chief Medical Officer. At Rockhampton, Ipswich, and Toowoomba the school sisters carried out routine examinations, and these classes were all visited by the Chief Medical Officer during the year and local problems discussed with the staff.

THE DENTAL SERVICES.

For the year 1948 school dentists treated 19,838 school children, this being about 1,600 more than the previous year. The work was performed by three rail dental clinics, two dentists using official cars and portable equipment and the remaining dentists using public and hired transport. Many more dentists are needed if all children are to be dentally examined and treated annually, which is regarded as a reasonable standard.

It is hoped the new rail dental clinic will be ready for operation in the 1950 school year. It will comprise two full-sized rail coaches. Two modern dental surgeries fitted with the latest electrical equipment and living quarters for staff will make the clinic a most welcome addition to the dental section.

The report of the Chief Dental Inspector setting out in detail the work for twelve months ending 1948 is appended.

GATTON AGRICULTURAL COLLEGE.

As in previous years, medical and dental examinations were carried out at Gatton College; 160 new students were immunized against tetanus and typhoid fever and all students at the College were dentally examined. During the influenza epidemic of 1948 nursing assistance was given by School Health sisters and one sister acted as matron for the College following the resignation of the permanent matron.

TEACHER TRAINEES.

193 teacher trainees were examined for entrance to the Department of Public Instruction. The examinations were conducted by the Chief Medical Officer, the part-time ophthalmologists, and the Chief Dental Inspector.

WILSON OPHTHALMIC SCHOOL HOSTEL.

The daily average of children at the Wilson Ophthalmic School Hostel for the year was 22. At 30/6/49, the actual number was 41, most of whom were admitted as a result of Dr. Marks' visit to Western Queensland at the end of 1948. The length of stay at the hostel is now much shorter than in former years, due to the decrease in the severity of the disease. The general health of the children has been good.

SCHOOL DENTAL SERVICE.

Inspection.

The subjoined table details the total findings revealed at the different inspections of the full staff of School Dental Officers during the year:—

TABLE LXXVI.

Number of Children Examined.	Number Notified for Professional Attention.	Number of Children under Regular Dental Care.			Number with Sound Mouths.		Carious Teeth Saveable (Permanent).	Carious Teeth Unsaveable (Permanent).	Temporary Carious Teeth.	Permanent Teeth Lost or Extracted.	Six-year Molars Extracted.
		Clinic.	School Dental Officer.	Private Dentist	Natural.	Operatively Re-stored.					
30,967	9,906	1,366	5,967	6,725	2,292	5,031	32,347	4,493	39,713	12,284	9,952

TABLE LXXVI.—continued.

Permanent Teeth Filled.	Temporary Teeth Filled.	State of Mouth.			Use of Tooth Brush.			Percentage of Children with Dirty Mouths.	Total Number of Defective Permanent Teeth.	Average Number of Defective Permanent Teeth per Child
		*A.	*B.	*C.	†A.	†B.	†C.			
40,093	7,965	9,540	17,599	3,828	8,743	16,744	5,480	12	36,840	1.1

State of Mouth—

- *A.—Good Standard of Mouth Health.
- *B.—Fair Standard of Mouth Health.
- *C.—Bad Standard of Mouth Health.

Use of Tooth Brush—

- †A.—With a *full* measure of effectiveness.
- †B.—With a *partial* measure of effectiveness.
- †C.—With no effectiveness.

Clinical Phase of Service.

Tabulated hereunder are particulars of the total treatment performed through the application of the clinical activities associated with the Department's dental service for children for the period under review, excluding the treatment performed in country areas throughout the State, by Hospitals Board Dental Clinics.

Number of Children Treated.	Number of Extractions Performed.	Number of Fillings Inserted.	Number of Other Treatments.
19,838	19,251	81,155	24,268

TABLE LXXVII.

TABLE OF FINDINGS—SCHOOL HEALTH SERVICES—1948-1949.

Number of visits paid to Schools on medical inspection by school sisters—

Metropolitan	..	..	..	126
Country	..	..	..	684

Number of children examined by school sisters—

Metropolitan	..	..	..	32,274
Country	..	..	..	46,175

Number of children whose parents were notified of child's defect—

Metropolitan	..	..	..	814
Country	..	..	..	3,930

Number of children known to have been treated by medical practitioners—

Metropolitan	..	..	..	749
Country	..	..	..	2,127

Number of homes visited by school sisters—

Metropolitan	..	..	..	62
Country	..	..	..	346

Apparent physical defects discovered by metropolitan and country school sisters—

Defect.	Metropolitan.	Country.	Total.
Defective vision	345	968	1,313
Strabismus	7	103	110
Other eye defects	6	234	240
Deafness	15	125	140
Ear discharge	8	30	38
Nasal defects	46	629	675
Tonsils	497	2,105	2,602
Scabies	41	102	143
Impetigo	97	510	607
Tinea	12	36	48
Pediculosis	940	973	1,913
Groin swelling	24	105	129
Scrotum swelling	11	43	54
Spinal defects	6	90	96
Other defects	28	610	638

Number of special cleanliness visits made by school sisters to schools—

Metropolitan	..	..	..	32
Country	..	..	..	11

Number of children examined—cleanliness visits by school sisters—

Metropolitan	3,239
Country	637

Defects found on special cleanliness visits by metropolitan and country school sisters—

Defect.	Metro- politan.	Country.	Total.
Pediculosis	228	18	246
Scabies	15	1	16
Impetigo	15	..	15
Other defects	6	..	6

Number of cases of diphtheria in school children—

Metropolitan	4
Country	38

Number of cases of scarlet fever in school children—

Metropolitan	67
Country	91

Number of cases of infantile paralysis in school children—

Metropolitan	2
Country	13

Number of cases of lead poisoning in school children—

Metropolitan	—
Country	1

Number of cases of cerebro-spinal meningitis in school children—

Metropolitan	—
Country	5

Number of cases of tetanus in school children—

Metropolitan	2
Country	3

Number of cases of malaria in school children—

Metropolitan	1
Country	—

WILSON OPHTHALMIC SCHOOL HOSTEL.

—	Boys.	Girls.	Total.
Number of children on roll 1st July, 1948	11	15	26
Number admitted during the year	28	14	42
Number discharged during the year	12	15	27
Number on roll 30th June, 1949	27	14	41

The admissions came from the following localities:—Camooweal, Charleville, Cloncurry, Cunnamulla, Dirranbandi, Dobbryn, Emerald, Julia Creek, Kajibbi, Kynuna, Longreach, Moreville, Windorah.

All the admissions during the year have been mild cases without any corneal involvement. One boy with a marked squint who was in the hostel a few years ago and whose lids are now well was readmitted so that the squint could be treated, while his younger brother was admitted at the same time with trachoma. The child from Moreville was not trachoma, but a refraction case badly needing correction. He was only in the hostel until this had been attended to.

The tour of the Western Queensland schools from Talwood to Camooweal and Burketown by the part-time ophthalmologist extended from 2nd October to the second week of December, 1948. The children were examined for trachoma and suitable cases selected for the hostel. While the incidence was found to be approximately the same as on the examination of two years before, the severity of the disease continued to diminish. Not one of the children examined had any corneal involvement. Most of those selected who have come to the hostel are showing such great improvement that many will soon be fit to return to their homes. A detailed report of the tour was submitted.

SECTION OF MENTAL HYGIENE.

B. F. R. STAFFORD, M.B., B.S. (Melb.), Director of Mental Hygiene and Medical Superintendent, Brisbane Mental Hospital.

During the year the Director of Mental Hygiene attended the Congress of the Australasian Association of Psychiatrists and met, amongst others, Dr. G. L. Ewan, Deputy Inspector-General of Mental Hospitals, New South Wales. As a result of the discussions the impression was gained that England and America were far ahead of Australia in psychiatric research and in the application of clinical discoveries.

As far as Queensland is concerned a creditable advance in hospital administration has been achieved, and this has greatly increased maintenance and treatment costs in recent years. Although procedures which have been developed and proven overseas have been adopted, little has been done on the research side of psychiatry, and until competent men with postgraduate experience can be enlisted in the Mental Hygiene Service research cannot be developed.

A Diploma in psychiatry has been established by the University of Queensland and it is anticipated this will be a means of raising the standard of psychiatric medical practice.

It is hoped that Professor Alexander Kennedy, Professor of Psychiatry, University of Durham, England, will visit Queensland later in the year and survey the Service and make recommendations.

In Queensland a good deal has already been accomplished in respect of individual mental hospitals but much still remains to be done. It should prove a goal worthy of this State to secure key personnel for the following activities:—

- (1) Clinical psychiatry;
- (2) Psychopathology and neuropathology with research activities;
- (3) Backwardness;
- (4) Delinquency and crime;
- (5) Social Service and after-care organisations.

The need for these activities would be very apparent by reference to the statistical tables forwarded with this report. Excluding the senile and mental deficiency cases, it will be seen that there is a very large number of persons of all ages and from all walks in life who are resident in the mental hospitals for very many years. This one avenue provides a very wide field for psychiatric research, and as a result patients might be sooner returned to their homes and again take part in the State's social structure.

The Psychiatric Clinics at Brisbane and Toowoomba continue to function actively and the demands upon their services are more than can be adequately met.

The acute shortage of female nursing staff still persists and male nursing assistants in the female sections of the hospitals continue to undertake the less intimate nursing. In addition to the actual duties performed by these officers their employment enables the trained female nursing staff to be beneficially employed in active psychiatric nursing.

Modern standards of treatment were maintained and shock, convulsive, and occupational therapies were continued. The new occupational therapy blocks at the Toowoomba and Ipswich Mental Hospitals are almost completed, and the occupancy of these will allow this therapy to be considerably widened at those hospitals.

The general health of the patients during the past year has been good and no serious epidemics or illnesses occurred.

Close attention is paid to the standards of patients' food and clothing to ensure that these are kept at a reasonably high level.

Recreation for patients has been provided by picture shows, concerts, dances, and various forms of reading matter, while outdoor entertainment is provided by 'bus trips and country walks.

Various public-minded bodies visit the hospitals for the entertainment of the patients therein and the fullest appreciation is expressed of their actions.

Staff uniforms were reviewed during the past year and the garments now issued are more in keeping with the medical aspect of the male and female nurses' duties.

The hairdressing salon for female patients at the Brisbane Mental Hospital is functioning very smoothly and provides a form of what might be described as social therapy which is very definitely beneficial in the treatment of patients.

The grounds of the various mental hospitals continue to be further improved in collaboration with the Acting Superintendent of Institutional Gardens.

A 'bus service has been inaugurated for the transport of visitors and staff between the Goodna Railway Station and the Brisbane Mental Hospital and this has proved a boon to all.

Medical students from the University of Queensland continue to visit the Brisbane Mental Hospital as part of their curriculum, and the question of widening this tuition is under consideration.

During the past year the Honourable the Minister for Health and Home Affairs, the Under Secretary, and the Director-General of Health and Medical Services, have visited the hospitals.

A statistical table showing the movement of patients in the three mental hospitals is shown hereunder:—

TABLE LXXVIII.
QUEENSLAND PSYCHIATRIC HOSPITALS.

ADMISSIONS, READMISSIONS, DISCHARGES, AND DEATHS DURING THE YEAR ENDED 30TH JUNE, 1949.

										Males.	Females.	Total.
On the books of the Hospitals on 1st July, 1948										2,070	1,834	3,904
										M.	F.	T.
Admitted for the first time										327	340	667
Readmitted										75	91	166
Total under care during the year										2,472	2,265	4,737
Discharged—												
Recovered										159	197	356
Section 49										35	25	60
Relieved										20	29	49
Not improved										7	4	11
Voluntarily left										13	1	14
Died										178	113	291
Total discharged and died										412	369	781
Remaining on Books of Hospitals on 30th June, 1949										2,060	1,896	3,956
Average number daily resident										1,988	1,764	3,752
Number on leave of absence on 30th June, 1949										74	94	168
Proportion of mentally sick to each 1,000 of population as at 31st December, 1948										3.55	3.43	3.49
Proportion of admissions per 10,000 of population for year ended 31st December, 1948										6.93	7.83	7.37

TABLE LXXIX.

STATEMENT SHOWING EXPENDITURE ON THE UNDER-
MENTIONED MENTAL HOSPITALS FOR THE TWELVE
MONTHS ENDED 30TH JUNE, 1949.

Goodna Mental Hospital.

	£	s.	d.	£	s.	d.
Conversion of three male wards for use of female patients	1,341	16	2			
Louvres to various wards ..	1,069	17	7			
Extension of A.C. Supply ..	147	1	10			
Provision of drive lights ..	467	18	11			
Conversion of army huts for use as canteen	1,404	9	11			
Reconditioning and resurfacing roadways ..	1,010	13	4			
Enclosing verandahs ..	45	0	4			
Supply and erection of rectifier, &c.	338	8	0			
Additions to old produce store building	56	7	11			
Construction of dam ..	2,373	7	1			
Various repairs, improvements, &c.	1,495	17	7			
				9,750	18	8

Ipswich Mental Hospital.

Enclosing bays	..	..	91	7	9
Therapy Block for Males and Females	..	..	961	7	1
Various repairs, improvements, &c.	..	..	243	18	3
					1,296 13 1

TABLE LXXIX.—continued,
Toowoomba Mental Hospital.

	£	s.	d.
Extension of projector room	73	7	3
Therapy Block for females	2,393	16	3
Conversion of room into bulk store for dispensary	55	17	4
Provision for telephone exchange	1,000	3	10
Installation of additional power outlets	455	8	0
Resumption of land ..	60	16	10
Furniture	812	8	9
Various repairs, improvements, &c.	1,418	16	3
			6,270 14 6

Willowburn Epileptic Home.

Hot water supply to showers	112	7	10						
Various repairs, improve- ments, &c.	67	8	11						
								179	16 9
								<u>£17,498</u>	<u>3 0</u>

As mentioned in last year's report the Townsville Mental Hospital closed as such towards the end of that year and early and incipient cases of mental sickness from that area have been treated in the psychiatric section of the Townsville General Hospital. The patients are under the control of Dr. A. S. Ellis, who possesses a diploma of Psychological Medicine. This is an example of the policy of decentralisation as the position of visiting part-time psychiatrist was created when Dr. Ellis decided to settle in Townsville.

BRISBANE PSYCHIATRIC CLINIC.

J. C. WINSHIP, B.A., Psychologist.

The continuing progress of the psychiatric clinic may be gauged roughly by the further increase in the number of new patients, which for the years 1945 to 1949 have been 105, 106, 255, and 371 respectively, and this with a minimum of publicity. Since everyone is entitled to the services of the clinic it is felt that wider publicity ought to be given to its activities, but insufficient staff and accommodation preclude such a possibility. Accommodation does not meet even present requirements—for instance, it is impossible to set aside a room for play therapy, a method which would materially shorten many speech cases besides playing its part in play therapy cases proper.

In assessing the figures given it should be remembered that although the groups of patients shown are mutually exclusive for the sake of tabulation, in actual fact any one patient may be seen by doctor and/or psychologist and/or speech therapist. Further, some 43 patients have been referred for specialist advice to the visiting consultant in ear, nose and throat diseases. Finally, 20 patients were sent for audiometric testing to the recently opened Commonwealth Acoustic Laboratory.

This year the work of four students doing Honours Psychology courses was directed from the clinic, in the course of which an additional 100 children (not shown in the tables) were

tested. One interesting development therefrom has been that the institutions in which the studies were carried out have sought guidance in many of their psychological problems. This is felt to be a desirable and, in fact, economical service since advice and help given to the staff of an institution affects many more children than does that given to the patient of a family.

The most pressing problem of these and other institutions is how best to provide for the "backward" child, since they are becoming an increasing percentage of the population. It is regretted that the Backward Persons Act has not been able to be implemented, due mainly to the difficulties of buildings and shortage of trained staff.

Shortly before the end of the financial year 1947-48 a speech therapist was appointed and she is doing excellent work. It is intended to recommend that a second appointment be made, as the number of patients to be treated necessitates a waiting list.

It appears that the psychiatric clinic has now established for itself a definite place among those facilities existing in the community for its better health and welfare. A solid basis has been laid on which to build a very much worthwhile service if reasonable attention is given to its requirements.

BRISBANE PSYCHIATRIC CLINIC.

TABLE LXXX.

FORMS OF MENTAL DISORDERS IN PATIENTS TREATED DURING THE TWELVE MONTHS ENDING 30TH JUNE, 1949.

			0-4.		5-9.		10-14.		15-19.		20-29.		30-39.		40-49.		50-59.		60-.		Total.		Total.		
			M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.			
Depression	3	1	1	..	1	..	1	1	1	6	7		
Dep. Involut.	2	2	2			
Schizophrenia ..	..	..	..	..	..	..	1	..	3	..	1	3	3	1	..	2	..	..	8	6	14	
Paraphrenia ..	..	..	..	..	..	..	..	..	..	..	..	1	..	3	..	2	..	1	..	7	7	
Anx. and Depress. ..	..	..	..	..	..	..	..	1	1	..	3	4	2	4	1	1	..	..	7	10	17	
Anxiety ..	..	1	..	1	..	..	..	..	3	5	9	8	5	2	..	3	1	1	20	19	39	
Hysteria ..	..	..	..	..	..	..	..	..	2	..	..	4	1	1	..	1	..	..	3	6	9	
Obsess. Compulsive ..	..	..	..	..	..	..	..	..	1	1	2	1	..	1	1	..	..	..	4	3	7	
Schizoid Pers. ..	..	..	..	1	..	..	..	1	5	..	..	1	1	1	..	..	..	..	7	3	10	
Chron. Alcohol. ..	..	..	..	..	..	..	..	..	..	..	1	..	1	..	1	..	..	..	3	..	3	
Epilepsy ..	..	1	..	..	..	..	..	1	..	1	..	1	..	..	..	..	..	..	1	3	4	
Senility ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	2	1	2	3	
Various Org. ..	..	..	1	2	1	1	3	..	..	1	..	..	1	1	1	..	2	..	7	7	14	
																						62	74	136	136
Idiot ..	..	1	..	2	..	..	..	..	..	..	..	..	..	..	..	..	..	..	3	..	3	
Imbecile ..	..	..	..	3	1	3	7	1	1	1	..	..	..	..	..	..	..	..	8	10	18	
Moron ..	..	..	..	1	1	2	..	..	..	..	1	..	..	..	..	..	..	..	4	1	5	
																						15	11	26	
Social Delinq. ..	..	..	..	..	5	..	..	..	1	..	..	..	..	..	..	..	..	..	6	..	6	
Sexual Delinq. ..	..	..	..	..	..	..	2	..	..	..	..	..	1	..	..	..	..	..	3	..	3	
Behaviour Pr. ..	..	3	3	15	9	9	1	2	1	..	..	..	..	..	..	..	..	..	29	14	43	
Spastic ..	..	4	3	7	9	5	7	5	1	4	3	..	..	..	..	..	..	..	25	23	48	
																						63	37	100	
Diag. Testing ..	..	..	..	1	1	9	1	7	6	14	3	3	..	1	..	..	..	..	34	12	46	
Educ. Backward ..	..	..	..	4	1	2	2	..	..	..	..	..	..	..	..	..	..	..	6	3	9	
																						40	15	55	181
Stammering ..	..	1	1	5	1	3	..	5	1	4	1	2	..	..	..	..	1	..	21	4	25	
Dyslalia ..	..	1	..	8	4	1	..	1	..	..	..	..	1	..	..	..	..	..	12	4	16	
Cleft Palate ..	..	..	3	2	2	..	..	1	..	..	..	..	..	..	..	..	..	..	3	5	8	
Aphasia ..	..	..	..	..	..	..	..	..	1	..	..	..	..	1	..	..	..	..	1	1	2	
Dysphasia ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Dysarthria ..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	1	..	1	
Idioglossia ..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	1	
Laryngectomy ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	1	..	1	
																						40	14	54	54
Grand Total																					220	151	371	371

Speech Therapy	53 on waiting list.
Referred for Specialist E.N.T. Exam.	43
Referred for audiometric exam.	20

From—	Psychiatry.	Psychology.	Speech-Therapy.
ex B.M.H.	9	1	..
B.G.H.	1	4	1
Justice Department	4	2	1
Commonwealth Depts.	4	12	3
Red Cross	6	1	..
Medical Practitioners	30	27	16
Self	87	37	25
Other Sources	33	15	4
Spastic League .. .. .	..	44	4
	<hr/>	<hr/>	<hr/>
	174	143	54

BRISBANE MENTAL HOSPITAL.

H. R. G. BARRETT, M.B., B.S. (Melb.), Deputy Medical Superintendent.

J. A. HEDE, M.B., B.S. (Melb.),	} Medical Officers.
R. EVANS, M.B., Ch.B., B.A.O., N.U. (Irel.),	
B. C. ORDE, M.B., B.S. (Qld.),	
V. L. MATCHETT, M.B., B.S. (Syd.),	

There was a total of 2,811 patients under treatment during the past year, comprising 1,425 in the male section and 1,386 in the female section of the hospital. The average numbers daily resident were 1,039 male, 982 female, total 2,021 patients. The number of voluntary patients admitted were 25 males, 12 females, total 37 patients.

The patients admitted were broadly representative of the community. They included residents from the whole eastern and northern regions of the State. There was a wide representation of different nationalities, with approximately two-thirds of the admissions having been born in Queensland. The ages of the patients admitted ranged from 9 to 90, the numbers of married and single were equal, and the occupations covered a wide range.

There were 119 patients admitted who were aged 70 and upwards; and of these 111 or 16 per cent. of the total admissions were described as pensioners. There were 106 cases of senility admitted, 12 of whom died within one month after admission and a further 7 within three months after admission.

The general health of the patients has been well maintained, and this reflects to the credit of the medical and nursing staffs, since the serious shortage of medical and trained female nursing staff still endures.

Dr. P. F. V. Crowe, Deputy Medical Superintendent, died in his sleep during the night of 12th-13th May, 1949. He had served on the staff of the Mental Hygiene Service since 11th June, 1934, and during his period of loyal service earned the respect and affection of all associated with him.

The panel of consultant specialists has been widened by the appointments of Dr. V. McDowall, Radiologist, who commenced on 16th December, 1948, and Professor W. V. Macfarlane, Neurologist, whose visits began on 17th June, 1949.

Dr. B. C. Orde joined the medical staff on 19th April, 1949. The appointment of Mr. G. W. Evans, X-ray Technician, on 16th August, 1948, has enabled full use to be made of this unit.

Surveys of various patient groups were made during the year by the Queensland Institute of Medical Research under the direction of Dr. I. M. Mackerras.

The Official Visitors, Dr. F. C. Turnbull and Mr. G. A. Cameron, visited the hospital regularly, and following their inspections have expressed their satisfaction that the general welfare of patients was being safeguarded and that modern treatments of mental illness were being pursued. During the absence of Dr. Turnbull on an overseas tour Dr. A. G. Anderson acted in his stead.

We are still without the services of a laboratory technician, but this vacancy is likely to be filled in the very near future.

The most common types of mental sicknesses suffered by the patients admitted were the schizophrenic reaction types, which accounted for 238 cases. Senile cases comprised 48 males, 58 females, total 106 patients, while mental deficiency were present in a total of 82 patients.

There were 181 male and 183 female patients discharged recovered during the twelve months, the recovery rate based on the number of patients admitted being 52.15 per cent. If the senile and mental deficient patients were excluded from these figures the recovery rate would be 68 per cent.

There was a total of 183 deaths during the year, of whom 37 patients were aged 80 years and upwards while 4 were over 90 years of age. The deaths of one male and one female patient resulted from accident, whilst the deaths of one male and one female patient on leave were suicidal. In the case of the two accidental deaths and other sudden deaths which occurred in the hospital coronial enquiries were held, but in no case was there found to be any suspicious circumstances.

There were three births (two male, one female) during the year from pregnancies conceived prior to admission.

The standards of food and clothing are being maintained. Fresh milk is provided from the tested dairy herd here and an abundance of green vegetables from the market gardens.

The hairdressing salon was put into use on the 24th March last, following the appointment of two qualified ladies' hairdressers, resulting in a marked improvement in the personal grooming of the female patients.

Entertainments were held regularly in the recreation hall, comprising picture shows and concerts weekly throughout the year, with dances in addition during the cooler months. There were also occasional afternoon band concerts. Regular 'bus trips to the seaside were provided for patients, whilst a number of 'bus trips for ex-servicemen patients were also arranged.

The religious interests of all patients were guarded and services of the various denominations were held regularly, whilst some patients attended divine services in the nearby churches. In addition, individual visits were undertaken by representatives of the various religious denominations.

The Red Cross Society continues to supply fruit, cake, sweets, and tobacco regularly to returned soldier patients from both wars, and the local sub-branch of the R.S.S.A.I.L.A. provides for the comfort and entertainment of these patients by outdoor trips, concerts, and dinners.

The Repatriation Commission endow the entertainments in respect of the patients who are their responsibility, whilst the 'bus trips to the seaside referred to above were made possible by the co-operation of the Manager of "Eventide," Sandgate.

The local branch of the Country Women's Association visits the hospital regularly to provide entertainment for the female patients and officers from the Silver Hut continue to pay regular visits to a number of ex-servicemen patients.

Daily newspapers and periodicals are provided to the various wards throughout the hospital and each ward is also equipped with a wireless receiving set. Nearly all of the wards in the female section have their own pianos, whilst in the male section indoor recreation is provided by billiard and bagatelle tables.

The canteen has moved into the new building constructed for that purpose, with separate section reserved for the use of the staff, and renders a very efficient service.

Improvements are continually being effected to the grounds of the hospital, lights have been provided in the main driveway, an area of the

park has been graded, mistletoe has been eradicated from the various trees, and a dam is under construction to irrigate the farm lands.

A 'bus service commenced to ply from the station to the hospital on 8th May, 1949, and this is a very definite convenience both to members of the staff and to visitors.

During the past year head male nurse W. Lobban was promoted and transferred to "Eventide," Sandgate, and Mr. I. Constance was promoted in his stead. Assistant matron C. M. Heeney retired from the Service and charge nurse Egan was promoted in her stead. Mr. A. Rush, bushman, retired on the 31st December last, and I regret to record the death of charge nurse J. McLellan at the close of the year.

The statistical tables relating to this hospital are furnished herewith:—

TABLE LXXXI.—BRISBANE MENTAL HOSPITAL, GOODNA.
ADMISSIONS, READMISSIONS, DISCHARGES, AND DEATHS DURING THE YEAR ENDING 30TH JUNE, 1949.

						Males.	Females.	Total.
On the books of the hospital on 30th June, 1948						1,077	1,027	2,104
						M.	F.	T.
Admitted for the first time						277	283	560
Readmitted						66	72	138
Transferred from Toowoomba						2	3	5
Transferred from Ipswich						3	1	4
						348	359	707
Total under care during year						1,425	1,386	2,811
Discharged, died, transferred :—								
Discharged, recovered						137	160	297
Discharged, section 49						31	22	53
Discharged, relieved						6	9	15
Discharged, not improved						5	..	5
Voluntarily left						13	1	14
Transferred to Toowoomba .. .. .						..	5	5
Transferred to Ipswich						2	11	13
Died						109	74	183
Total discharged, died, &c., during year						303	282	585
Remaining on the books of the hospital on 30th June, 1949						1,122	1,104	2,226
Average number daily resident						1,039	982	2,021
Number on leave of absence on 30th June, 1949						65	81	146

TABLE LXXXII.—BRISBANE MENTAL HOSPITAL, GOODNA.
ADMISSIONS, DISCHARGES, AND DEATHS WITH THE PROPORTIONS OF RECOVERIES AND DEATHS PER CENT. DURING
THE YEAR ENDED 30TH JUNE, 1949.

—		Admitted	Re-admitted.	Discharged.			Died.	Re-maining on 30th June, 1949.	Average Number Daily Resident.	Per-centage of Re-coveries on Ad-missions.	Per-centage of Patients Relieved.	Per-centage of Deaths on Average Number Resident.
				Re-covered.	Relieved.	Not Improved.						
Males	..	277	66	181	6	5	109	1,122	1,039	52·89	1·75	10·05
Females	..	283	72	183	9	..	74	1,104	982	51·55	2·53	7·53
Total	..	560	138	364	15	5	183	2,226	2,021	52·15	2·15	9·05

TABLE LXXXIII.

BRISBANE MENTAL HOSPITAL, GOODNA.

FORMS OF MENTAL DISORDERS IN PATIENTS ADMITTED DURING THE TWELVE MONTHS ENDING 30TH JUNE, 1949.

	Male.	Female.	Total.		Male.	Female.	Total.
1. AFFECTIVE REACTION TYPES—				4. EPILEPTIC REACTION TYPES—			
(a) Manic Depressive Psychosis	13	13	26	Epileptic Psychosis ..	8	10	18
(b) Mania	18	24	42	Epileptic Dementia ..	1	2	3
Recurrent Mania .. ..	..	1	1	Epileptic Amentia .. ..	..	1	1
Acute Mania .. .. .	..	1	1				
(c) Depression	20	21	41	5. PSYCHONEUROTIC REACTION			
Acute Depression	1	..	1	TYPES—			
Agitated Depression ..	..	4	4	Psychoneurosis	8	13	21
Recurrent Depression ..	..	1	1				
(d) Dementia (Manic Depressive)	..	1	1				
(e) Involutional Psychosis ..	..	14	14				
Involutional Depression ..	1	1	2				
2. SCHIZOPHRENIC REACTION							
TYPES—				6. MENTAL DEFICIENCY—			
(a) Schizophrenia	72	89	161	(a) Mental Deficiency	35	19	54
Schizophrenia Dementia ..	2	1	3	Mental Deficiency with			
Schizoid Personality ..	2	1	3	Epilepsy	3	3	6
(b) Paraphrenia	37	34	71	Mental Deficiency with			
3. ORGANIC REACTION TYPES—				Schizophrenia	3	1	4
(a) Organic Psychosis .. ..	..	2	2	Mental Deficiency (Mongol)	3	1	4
Organic Psychosis (Hunting-				Mental Deficiency (Moron) ..	..	1	1
ton's Chorea) .. .. .	..	1	1	Mental Deficiency (Spastic			
Organic Dementia	4	2	6	Paresis) .. .. .	..	1	1
Organic Dementia (Hunting-				Mental Deficiency (Hydro-			
ton's Chorea)	2	..	2	cephalic)	1	..	1
Organic Dementia (Paget's)	..	1	1				
Disseminated Sclerosis ..	2	..	2	(b) Idiocy .. .. .	..	..	..
(b) Toxins—							
Alcoholic Psychosis	24	4	28	(c) Imbecility—			
Alcoholic Psychosis (Korsak-				Spastic Paraplegia	2	..	2
ov's)	4	2	6	Without Epilepsy	1	..	1
Confusional Psychosis ..	1	4	5				
Dementia Paralytica ..	3	2	5	(d) Moral Deficiency	5	3	8
(c) Degenerative Brain Changes—							
Senile Dementia	38	54	92	7. TRAUMATIC PSYCHOSIS ..	1	..	1
Senile Psychosis	10	4	14				
Pre-senile Psychosis ..	2	2	4				
Arteriosclerotic Dementia	8	7	15				
Arteriosclerotic Psychosis	8	9	17				
					343	355	698

TABLE LXXXIV.
BRISBANE MENTAL HOSPITAL.

CAUSES OF DEATHS WHICH OCCURRED DURING PERIOD
ENDING 30TH JUNE, 1949.

—	Male.	Fe- male.	Total.
GENERAL DISEASES—			
Diabetes	1	..	1
Carcinoma of Cervix .. ..	..	1	1
Carcinoma of Gall Bladder ..	1	..	1
Bed Sore .. .. .	..	1	1
DISEASES OF NERVOUS SYSTEM—			
Dementia Paralytica	3	2	5
Status Epilepticus	2	1	3
Exhaustion	1	..	1
Congenital Imbecility	1	..	1
Senility	30	9	39
Cerebral Hæmorrhage	3	2	5
Cerebral Degeneration	1	2	3
Cerebral Thrombosis .. ..	..	2	2
DISEASES OF CIRCULATORY SYSTEM—			
Chronic Cardiac Disease.. ..	1	1	2
Congestive Cardiac Failure ..	8	3	11
Myocardial Degeneration ..	3	7	10
Cardiovascular Degeneration ..	6	9	15
Cardiovascular Disease	5	9	14
Coronary Occlusion	2	..	2
Anæmia .. .. .	..	1	1
Toxæmia	1	..	1
Syncope	8	5	13
DISEASES OF RESPIRATORY SYSTEM—			
Hypostatic Pneumonia	3	1	4
Bronchopneumonia	9	5	14
Lobar Pneumonia	2	..	2
Pulmonary Oedema	2	3	5
Pulmonary Tuberculosis	7	3	10
DISEASES OF ALIMENTARY SYSTEM—			
Colitis	3	..	3
Carcinoma of Cæcum .. ..	..	1	1
Gastroenteritis	1	1	2
Peritonitis	1	..	1
Intestinal Obstruction .. ..	..	1	1
Acute Dilatation of Stomach ..	1	..	1
DISEASES OF GENITO-URINARY SYSTEM—			
Uræmia .. .. .	..	1	1
Nephritis	1	1	2
Enlarged Prostate	1	..	1
Trauma	1	2	3
	109	74	183

TABLE LXXXV.

BRISBANE MENTAL HOSPITAL, GOODNA.

BODILY HEALTH AND CONDITION OF PATIENTS ADMITTED
DURING YEAR ENDED 30TH JUNE, 1949.

—	Males.	Fe- males.	Total.
In apparently good health and condition	229	261	490
In indifferent health and reduced condition	86	77	163
In bad health and exhausted condition	28	17	45
	343	355	698

TABLE LXXXVI.

BRISBANE MENTAL HOSPITAL, GOODNA.

BIRTHPLACES OF PATIENTS ADMITTED DURING THE
TWELVE MONTHS.

—	Males.	Fe- males.	Total.
Queensland	213	244	457
New South Wales	24	23	47
Victoria	14	5	19
South Australia	2	..	2
Western Australia	2	1	3
Tasmania	2	2	4
New Guinea .. .. .	..	1	1
New Zealand	1	1	2
England	26	29	55
Scotland	11	5	16
Ireland	7	12	19
Wales	1	1	2
United States of America ..	..	1	1
Italy	3	4	7
Germany	1	1	2
Sicily .. .. .	..	1	1
Egypt .. .. .	..	1	1
Denmark	1	..	1
Poland	2	..	2
Greece	2	..	2
Roumania .. .. .	..	1	1
India	2	..	2
Russia .. .. .	..	1	1
Albania	1	..	1
Malta	1	..	1
Cyprus	1	..	1
Sweden	2	..	2
Unknown	24	21	45
	343	355	698

TABLE LXXXVII.

BRISBANE MENTAL HOSPITAL, GOODNA.

DISTRICTS WHENCE PATIENTS WERE RECEIVED DURING
YEAR ENDED 30TH JUNE, 1949.

—	Males.	Fe- males.	Total.
Northern and North-western Dis- tricts	40	31	71
Central Districts	29	19	48
Southern and South-western Dis- tricts	274	305	579
	343	355	698

TABLE LXXXVIII.—BRISBANE MENTAL HOSPITAL.

AGE GROUPS OF PATIENTS WHOSE ADMISSIONS, DISCHARGES OR DEATHS OCCURRED DURING THE YEAR, AND OF THOSE WHO REMAINED IN THE HOSPITAL ON 30TH JUNE, 1949.

Age Group.	Admissions.			Discharges.						Deaths.			Remaining.		
				Recovered.			Relieved and not Improved.								
	M.	F.	T.	M.	F.	T.	M.	F.	T.	M.	F.	T.	M.	F.	T.
Under 5 years .. .. .	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
5 years and under 10 years	4	..	4	1	..	1	1	..	1	..	..	..	2	..	2
10 years and under 15 years	2	3	5	1	..	1	1	..	1	..	..	..	12	2	14
15 years and under 20 years	19	6	25	9	7	16	1	..	1	1	1	2	39	9	48
20 years and under 30 years	54	65	119	39	36	75	2	2	4	4	6	10	145	120	265
30 years and under 40 years	72	63	135	41	39	80	3	2	5	6	3	9	207	201	408
40 years and under 50 years	40	66	106	27	36	63	1	3	4	11	4	15	231	252	483
50 years and under 60 years	59	46	105	35	32	67	..	..	..	15	8	23	237	231	468
60 years and under 70 years	40	38	78	16	23	39	1	..	1	24	8	32	153	149	302
70 years and under 80 years	34	43	77	12	7	19	1	1	2	27	23	50	71	101	172
80 years and under 90 years	17	22	39	..	3	3	..	1	1	20	17	37	22	36	58
90 years and over .. .. .	..	3	3	..	..	..	..	..	..	1	3	4	..	3	3
Unknown	2	..	2	..	..	..	..	..	..	..	1	1	3	..	3
Totals	343	355	698	181	183	364	11	9	20	109	74	183	1,122	1,104	2,226

TABLE LXXXIX.
BRISBANE MENTAL HOSPITAL, GOODNA.
OCCUPATIONS OF PATIENTS ADMITTED DURING THE TWELVE MONTHS.

				Males.	Fe- males.	Total.					Males.	Fe- males.	Total.
Apprentice .. .. .	..	..	..	1	..	1	Moulder .. .. .	..	..	..	1	..	1
Barmaid .. .. .	..	..	..	..	1	1	Nil .. .. .	..	..	..	18	6	24
Blacksmith .. .. .	..	..	..	1	..	1	Nurse .. .. .	..	..	..	2	4	6
Builder .. .. .	..	..	..	2	..	2	Office cleaner .. .. .	..	..	..	..	2	2
Boot repairer .. .. .	..	..	..	1	..	1	Painter .. .. .	..	..	..	1	..	1
Cane cutter .. .. .	..	..	..	1	..	1	Pensioner .. .. .	..	..	..	63	48	111
Caretaker .. .. .	..	..	..	2	..	2	Postal employee .. .. .	..	..	..	1	..	1
Carpenter .. .. .	..	..	..	4	..	4	Presser .. .. .	..	..	..	1	..	1
Carrier .. .. .	..	..	..	1	..	1	Plasterer .. .. .	..	..	..	1	..	1
Chemist .. .. .	..	..	..	2	..	2	Police constable .. .. .	..	..	..	1	..	1
Child .. .. .	..	..	..	9	3	12	Railway employee .. .. .	..	..	..	2	..	2
Clerk .. .. .	..	..	..	5	2	7	Rigger .. .. .	..	..	..	1	..	1
Collector .. .. .	..	..	..	1	..	1	Shop assistants .. .. .	..	..	..	1	4	5
Cook .. .. .	..	..	..	2	..	2	Shearer .. .. .	..	..	..	2	..	2
Domestic duties .. .. .	..	..	..	..	256	256	Stenographer .. .. .	..	..	..	..	1	1
Dressmaker .. .. .	..	..	..	..	2	2	Salesman .. .. .	..	..	..	2	..	2
Dentist .. .. .	..	..	..	..	1	1	Station hand .. .. .	..	..	..	3	..	3
Electrician .. .. .	..	..	..	4	..	4	Stockman .. .. .	..	..	..	5	..	5
Electric welder .. .. .	..	..	..	1	..	1	Storehelper .. .. .	..	..	..	4	3	7
Farmer .. .. .	..	..	..	23	1	24	Sawmill worker .. .. .	..	..	..	2	..	2
Farm hand .. .. .	..	..	..	7	..	7	Seaman .. .. .	..	..	..	1	..	1
Film operator .. .. .	..	..	..	1	..	1	Stable hand .. .. .	..	..	..	1	..	1
Governess .. .. .	..	..	..	..	2	2	Tailor .. .. .	..	..	..	2	1	3
Grazier .. .. .	..	..	..	2	..	2	Typiste .. .. .	..	..	..	..	4	4
Hotelkeeper .. .. .	..	..	..	1	..	1	Timber cutter .. .. .	..	..	..	2	..	2
Journalist .. .. .	..	..	..	1	..	1	Unknown .. .. .	..	..	..	26	12	38
Labourer .. .. .	..	..	..	111	..	111	Waitress .. .. .	..	..	..	..	2	2
Linesman .. .. .	..	..	..	1	..	1	Waterside workers .. .. .	..	..	..	4	..	4
Mechanic .. .. .	..	..	..	5	..	5	Watchmaker .. .. .	..	..	..	1	..	1
Mill hand .. .. .	..	..	..	1	..	1	Wool classer .. .. .	..	..	..	1	..	1
Miner .. .. .	..	..	..	2	..	2							
Mining prospector .. ..	..	..	..	1	..	1					343	355	698
Meatworker .. .. .	..	..	..	1	..	1							

TABLE XC.—BRISBANE MENTAL HOSPITAL, GOODNA.
MARITAL STATUS OF PATIENTS WHOSE ADMISSIONS, DISCHARGES AND DEATHS OCCURRED DURING THE YEAR, AND OF PATIENTS WHO REMAINED IN THE HOSPITAL ON 30TH JUNE, 1949.

Marital Status.	Admissions.			Discharges.						Deaths.			Remaining.		
				Recovered.			Relieved or Not Improved.								
	Males.	Fe- males.	Total.	Males.	Fe- males.	Total.	Males.	Fe- males.	Total.	Males.	Fe- males.	Total.	Males.	Fe- males.	Total.
Single	190	102	292	107	62	169	1	4	5	45	25	70	877	506	1,383
Married	114	177	291	61	98	159	9	4	13	37	24	61	191	424	615
Widowed	25	70	95	6	18	24	..	1	1	21	23	44	23	162	185
Divorced	5	5	10	2	4	6	1	..	1	..	..	..	13	9	22
Unknown	9	1	10	5	1	6	..	..	..	6	2	8	18	3	21
	343	355	698	181	183	364	11	9	20	109	74	183	1,122	1,104	2,226

TABLE XCI.—BRISBANE MENTAL HOSPITAL.

LENGTH OF RESIDENCE IN THE HOSPITAL OF THE PATIENTS WHO WERE DISCHARGED OR WHO DIED DURING THE YEAR AND OF THOSE WHO REMAINED ON THE BOOKS OF THE HOSPITAL ON 30TH JUNE, 1949.

Length of Residence.	Discharges.						Deaths.			Remaining.		
	Recovered.			Relieved or not Improved.								
	M.	F.	T.	M.	F.	T.	M.	F.	T.	M.	F.	T.
Under 1 month	5	1	6	1	..	1	23	6	29	36	27	63
1 month and under 3 months	24	28	52	..	4	4	22	14	36	36	56	92
3 months and under 6 months	46	74	120	4	2	6	9	5	14	52	70	122
6 months and under 9 months	36	27	63	1	..	1	4	4	8	50	51	101
9 months and under 12 months	19	13	32	..	3	3	5	3	8	37	36	73
1 year and under 2 years	26	24	50	2	..	2	12	11	23	109	122	231
2 years and under 3 years	11	6	17	1	..	1	7	5	12	79	78	157
3 years and under 5 years	8	7	15	..	..	..	4	5	9	118	131	249
5 years and under 7 years	2	1	3	..	..	..	4	5	9	91	98	189
7 years and under 10 years	3	1	4	1	..	1	4	3	7	115	129	244
10 years and under 12 years .. .. .	..	..	..	..	..	..	3	1	4	60	59	119
12 years and under 15 years .. .. .	..	..	..	1	..	1	1	4	5	88	65	153
15 years and under 20 years	1	1	2	..	..	..	3	1	4	85	79	164
20 years and over .. .. .	..	..	..	..	..	..	8	7	15	166	103	269
	181	183	364	11	9	20	109	74	183	1,122	1,104	2,226

TABLE XCII.—BRISBANE MENTAL HOSPITAL.

QUANTITIES OF VEGETABLES AND FARM PRODUCE, TWELVE MONTHS ENDING 30TH JUNE, 1949.

Garden Vegetables	107 Tons
Potatoes	46 „
Pumpkins and Turnips	33 „
Maize	3 „
Chaff	50 „
Ensilage	252 „
Lucerne Hay	150 „
Green Feed	581 „
Milk	47,651 gallons

TABLE XCIII.

BRISBANE MENTAL HOSPITAL, GOODNA. EXPENDITURE TABLE.

Average number of daily residents during the twelve months ending 30th June, 1949, is 2,021.

	£	s.	d.
Total expenditure	324,996	17	0
Maintenance collected by Public Curator	39,935	1	10
Sales	758	19	7
Net expenditure	284,302	15	7
Gross cost per patient per annum	160	16	2
Net cost per patient per annum	140	13	6
Gross cost per patient per week	3	1	10
Net cost per patient per week	2	14	1

REPATRIATION PAVILION, WACOL.

This modern block continues to function satisfactorily. A close liaison is maintained with the Commonwealth Authorities through the Repatriation Commission, and the officers of the Commission continue to evince a keen interest in the patients being treated there. The Deputy Commissioner, the Senior Medical Officer, and other officers of the Commission frequently visit the pavilion, whilst a regular educational and occupational therapy service to the pavilion is maintained by the Repatriation Commission.

There were a total of 122 patients under treatment during the twelve months, with the movement of patients to and from the Brisbane Mental Hospital as occasion arises for various specialised treatments.

The Red Cross continues to distribute comforts and to pay regular visits to the pavilion.

An improvised theatrette has been established pending the construction of a permanent unit. Regular picture shows have been held and occasional concerts rendered.

A table showing the movement of the patients

in the pavilion during the twelve months is appended hereto.

TABLE XCIV.

WACOL REPATRIATION PAVILION.

MOVEMENT OF PATIENTS DURING THE TWELVE MONTHS ENDING 30TH JUNE, 1949.

On the books of the pavilion on 30th June, 1948 ..	68
Transferred from Brisbane Mental Hospital ..	52
Transferred from Toowoomba Mental Hospital	1
Transferred from Ipswich Mental Hospital ..	1
	122
Discharged, recovered	9
Discharged, under Section 49	2
Discharged, not improved	1
Voluntarily left	6
Transferred to Brisbane Mental Hospital ..	18
	36
Total discharged, &c., during year	36
Remaining on books of pavilion on 30th June, 1949 ..	86
Average number daily resident	72
Number on leave of absence on 30th June, 1949 ..	5

TOOWOOMBA MENTAL HOSPITAL.

Medical Superintendent: C. R. BOYCE, M.B. (Syd.).
Deputy Superintendent: J. H. B. HENDERSON, M.B., B.S. (Syd.).

Living conditions and comforts for patients and working conditions for the staff continue to improve and amenities added since the last annual report include the following:—

1. *Recreation Hall*.—Internal renovation, repair, and painting. Provision of better stage and orchestra lighting. Installation of electric draught fans. Installation of microphone and speakers for announcing, &c. Extra payment for engineers operating the pictures.

2. *Ward Yards and Hospital Grounds*.—Hygienic spring-tap drinking fountains are being erected and about six are already completed. Adequate overhead yard lights are now in operation. All ward yard lawns, gardens and paths are being improved and more garden seats are being obtained. Many more decorative trees, shrubs, and flower plants have been introduced. The sports oval is now enclosed by a picket fence and the pavilion has newly installed septic sewerage and showers.

3. *Entertainments and Religious Instruction*.—During the year patients have a variety of entertainments offered to them; these include:—

- Modern talkie programmes with the new double-header machine which obviates interruptions and breaks.
- Dances with staff and patient orchestra.
- Concerts by Monty Bloom and company.
- Visits by Country Women's Association; Returned Soldiers League; Salvation Army Band.
- Visits to the Toowoomba Show and to town for shopping.
- Visits by relatives are always encouraged.
- In the wards morning and evening daily papers and periodicals are regularly provided.
- Clergy of various denominations visit regularly.

4. *Dietary*.—Culinary equipment continues to improve and the new raised cement floor makes the kitchen much cleaner and easier to be kept clean. Kitchen staff has been increased by two. More hygienic delivery of meat has been arranged by construction of a new doorway. A high standard of cooking and a mixed nutritious and adequate diet is maintained.

5. *Laundry*.—Some alterations have been carried out and new machinery installed and greater efficiency is hoped for by the appointment of a male laundry manager.

6. *Engineers and Artisans*.—Considerable alteration has been completed in the engineer's office, work shop, and rest room and the engineer and his staff enjoy much more comfort and privacy for their skilled work. The artisans generally are badly provided for and it is hoped that the coming twelve months will see the blacksmith, plumbers, painters, carpenters, and others provided with much better working and hygienic housing and comforts. It must be mentioned that the carpenters have a new mortising machine and the blacksmith his much desired electric welding set.

7. *Farm and Vegetable Gardens*.—The vegetable garden continues to supply excellent produce for the patients dietary requirements. The farm staff are delighted by the recent acquisition of a motor tractor and new equipment and great results are expected. Despite a disastrous fire in the middle of harvesting and the destruction of machinery

bringing silo and woodeutting to a standstill, a total of 500 tons of ensilage was stored away. Last year's figure was 350 tons. The installation of a stationary oil engine costing £70 was responsible for the cutting of 200 tons of ensilage worth at a conservative estimate £1,200 and is now being used to cut up firewood.

8. *Psychiatry Clinic*.—The clinic functions actively and fills a definite want for the community. Its total function and usefulness would be improved by the appointment of a psychologist and a social service welfare worker, and it is intended to make recommendations to this effect during the coming year.

9. *New Buildings*.—The new lecture room is in operation. The telephone exchange room is completed, but the telephone changeover has not yet been done. In Ward 5 yard the occupational therapy building for female patients has been erected and its functioning is held up by installation of electric light, power, and heat. A doorway has been made between the dispensary and the present 'phone room and the latter is now used for storing bulk chemicals. This relieves the institution store of some of its congestion and is of benefit to both the store staff and to the dispenser.

10. *The Staff*.—An emergency still exists through acute shortage of female nurses, but matron and her assistant matrons continue to do an excellent job. Official visits are regular and the consulting surgeon, physician chiropodist, and dentist each render valuable services. A housekeeper (Mrs. Higgins) has been installed in the nurses' quarters and she has gone a long way towards restoring harmony and good feeding in her domain.

TABLE XCV.
TOOWOOMBA MENTAL HOSPITAL.
ADMISSIONS, READMISSIONS, DISCHARGES, DEATHS
DURING THE YEAR ENDING 30TH JUNE, 1949.

	Males.	Fe- males.	Total.
On Books of Hospital on 30th June, 1948	622	640	1,262
Admitted for the first time ..	32	49	81
Readmitted	9	19	28
Transferred from Brisbane ..	..	5	5
Transferred from Ipswich ..	1	..	1
	42	73	115
Total under care	664	713	1,377
Discharged, Died, Transferred—			
Discharged—Recovered ..	20	36	56
Discharged—Relieved ..	12	18	30
Discharged—Not improved ..	2	4	6
Discharged—Section 49 ..	2	3	5
Transferred to Brisbane ..	1	3	4
Transferred to Ipswich ..	..	..	..
Transferred to Wacol ..	1	..	1
Died	46	34	80
Total Discharged, Died, &c. ..	84	98	182
Remaining on Books on 30th June, 1949	580	615	1,195
Average number daily resident ..	590	613	1,203
Number on leave of absence on 30th June, 1949	6	13	19

TABLE XCVI.

FORMS OF MENTAL DISORDERS IN PATIENTS ADMITTED DURING THE TWELVE MONTHS.

	Males.	Fe- males.	Total.
1. AFFECTIVE REACTION TYPES—			
Acute Melancholia	6	12	18
Simple Melancholia	7	..	7
Acute Mania .. ..	..	5	5
Simple Mania	1	2	3
Manic-Depressive Psychosis (mixed state) .. ..	..	2	2
Chronic Mania	1	..	1
Involutional Melancholia ..	1	4	5
2. SCHIZOPHRENIC REACTION TYPES—			
Schizophrenia	11	5	16
Paraphrenia .. ..	..	8	8
3. EPILEPTIC REACTION TYPES—			
Epileptic Psychosis	1	1	2
4. ORGANIC REACTION TYPES—			
Arteriosclerosis .. ..	..	3	3
Trauma .. ..	..	1	1
Senile Psychosis	3	5	8
Chronic Alcoholism	1	1	2
Alcoholic Acute Hallucinosi ..	1	..	1
Alcoholic Dementia	1	..	1
General Paralysis of the Insane	1	..	1
5. PSYCHONEUROTIC REACTION TYPES—			
Anxiety Neurosis	3	8	11
Anxiety Neurosis with Chronic Alcoholism .. ..	..	1	1
6. MENTAL DEFICIENCY—			
Idiot	1	..	1
Imbecile	2	..	2
Feeble Minded .. ..	..	4	4
ACUTE CONFUSIONAL PSYCHOSIS	..	1	1
EMOTIONAL INSTABILITY .. ..	..	4	4
No PSYCHOSIS .. ..	..	1	1
Total	41	68	109

TABLE XCVII.

CAUSES OF DEATH DURING THE TWELVE MONTHS ENDING 30TH JUNE, 1949.

	Males.	Fe- males.	Total.
GENERAL DISEASES —			
Senility	2	..	2
DISEASES OF NERVOUS SYSTEM—			
Cerebral Thrombosis	2	1	3
Cerebral Syphilis	1	..	1
DISEASES OF CIRCULATORY SYSTEM			
Acute Myocarditis	4	2	6
Chronic Myocarditis	9	11	20
Coronary Occlusion	6	..	6
Arteriosclerosis	3	3	6
Hypertension	1	1	2
DISEASES OF RESPIRATORY SYSTEM			
Broncopneumonia	6	9	15
Lobar Pneumonia	1	1	2
Pulmonary Tuberculosis	6	..	6

TABLE XCVII—continued.

	Males.	Fe- males.	Total.
MALIGNANT DISEASES—			
Carcinoma of Stomach .. ..	..	1	1
Carcinoma of Pancreas	1	..	1
Carcinoma of Breast .. ..	..	1	1
Sarcoma of Breast	1	..	1
Epithelioma of Face .. ..	..	1	1
Peritonitis	2	..	2
Enteric Fever .. ..	..	1	1
Chronic Nephritis .. ..	..	1	1
Second Degree Burns .. ..	..	1	1
Fractured Spine	1	..	1
	46	34	80

TABLE XCVIII.

BODILY HEALTH AND CONDITION OF PATIENTS ADMITTED DURING TWELVE MONTHS ENDING 30TH JUNE, 1949.

	Males.	Fe- males.	Total.
In apparently good health and condition	31	42	73
In indifferent health and reduced condition	9	18	27
In bad health and exhausted condition	1	8	9
	41	68	109

TABLE XCIX.

BIRTHPLACES OF PATIENTS ADMITTED DURING THE YEAR ENDING 30TH JUNE, 1949.

	Males.	Fe- males.	Total.
Queensland	29	44	73
New South Wales	8	6	14
Victoria	3	2	5
India .. ..	..	1	1
England .. ..	..	3	3
Scotland .. ..	..	1	1
Ireland .. ..	..	3	3
Poland .. ..	..	1	1
Italy .. ..	..	2	2
Unknown	1	5	6
	41	68	109

TABLE C.

DISTRICTS WHENCE PATIENTS WERE ADMITTED DURING THE TWELVE MONTHS ENDING 30TH JUNE, 1949.

	Males.	Fe- males.	Total.
Northern and North-western Dis- tricts .. ..	..	..	..
Central Districts .. ..	..	..	..
Southern and South-western Dis- tricts	22	44	66
Toowoomba District	19	24	43
	41	68	109

TABLE CI.

AGES OF PATIENTS WHOSE ADMISSIONS, DISCHARGES OR DEATHS OCCURRED DURING THE YEAR AND OF PATIENTS WHO REMAINED IN THE HOSPITAL ON 30TH JUNE, 1949.

Ages.	Admissions.			Discharges.						Deaths.			Remaining.		
				Recovered.			Relieved and not Improved.								
	M.	F.	T.	M.	F.	T.	M.	F.	T.	M.	F.	T.	M.	F.	T.
Under 5 years	1	..	1	..	..	..	..	..	..	..	..	..	2	..	2
5 years and under 10 years	..	..	..	..	..	..	..	..	..	..	..	..	1	1	2
10 years and under 15 years	..	..	..	..	..	..	..	..	..	..	..	..	4	1	5
15 years and under 20 years	..	3	3	..	..	..	..	2	2	..	..	..	9	4	13
20 years and under 30 years	9	8	17	4	5	9	2	4	6	1	..	1	33	24	57
30 years and under 40 years	7	12	19	4	10	14	2	3	5	3	..	3	72	66	138
40 years and under 50 years	7	13	20	5	9	14	3	4	7	6	1	7	117	114	231
50 years and under 60 years	8	11	19	5	3	8	5	7	12	8	5	13	132	160	292
60 years and under 70 years	6	10	16	2	8	10	3	3	6	8	7	15	118	139	257
70 years and under 80 years	2	6	8	..	..	..	..	1	1	13	14	27	75	80	155
80 years and under 90 years	1	2	3	..	..	..	1	1	2	7	7	14	14	20	34
90 years and over .. ..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	1
Unknown .. ..	..	3	3	..	1	1	..	..	..	..	..	..	3	5	8
	41	68	109	20	36	56	16	25	41	46	34	80	580	615	1,195

TABLE CII.
PREVIOUS OCCUPATIONS OF PATIENTS ADMITTED DURING
THE TWELVE MONTHS.

—	Males.	Fe- males.	Total.
Butcher	1	..	1
Clerk .. .. .	..	2	2
Dairy farmer	1	1	2
Domestic duties .. .. .	..	15	15
Drover	2	..	2
Farmer	1	..	1
Farm labourer	1	..	1
Fitter	1	..	1
Foundry employee	1	..	1
Gardener	3	..	3
Household duties .. .. .	..	5	5
Housekeeper .. .. .	..	1	1
Housewife .. .. .	..	33	33
Labourer	7	..	7
Machinist	1	..	1
Nil	5	5	10
Office cleaner .. .. .	..	1	1

—	Males.	Fe- males.	Total.
Pensioner	2	..	2
Plumber	1	..	1
Retired	1	..	1
Sawmill hand	1	..	1
Seamstress .. .. .	..	1	1
Shearer	1	..	1
Shop assistant .. .. .	..	1	1
Station hand	4	..	4
Stockman	1	..	1
Stud farmer	1	..	1
Stud groom	1	..	1
Student .. .. .	..	1	1
Teacher .. .. .	..	1	1
Tractor driver	1	..	1
Waitress .. .. .	..	1	1
Wardsman	1	..	1
Wellborer	2	..	2
	41	68	109

TABLE CIII.
MARITAL STATUS OF PATIENTS WHOSE ADMISSIONS, DISCHARGES, AND DEATHS OCCURRED DURING THE YEAR AND
THOSE WHO REMAINED IN THE HOSPITAL ON 30TH JUNE, 1949.

Marital Status.			Admissions.			Discharges.						Deaths.			Remaining.		
						Recovered.			Relieved or Not Improved.								
			Males.	Fe- males.	Total.	Males.	Fe- males.	Total.	Males.	Fe- males.	Total.	Males.	Fe- males.	Total.	Males.	Fe- males.	Total.
Single	23	21	44	11	8	19	8	9	17	33	18	51	477	327	804		
Married	16	34	50	8	25	33	7	13	20	7	8	15	71	227	298		
Widowed	2	11	13	1	3	4	..	3	3	4	8	12	11	40	51		
Divorced .. ..	..	..	..	..	..	..	1	..	1	..	..	..	3	15	18
Unknown .. ..	..	2	2	..	..	..	..	..	..	2	..	2	18	6	24
	41	68	109	20	36	56	16	25	41	46	34	80	580	615	1,195		

TABLE CIV.
LENGTH OF RESIDENCE IN THE HOSPITAL OF THE PATIENTS WHO WERE DISCHARGED OR WHO DIED DURING THE
YEAR AND OF PATIENTS WHO REMAINED IN THE HOSPITAL ON 30TH JUNE, 1949.

—	Discharges.									Deaths.			Remaining.		
	Recovered.			Section 49.			Relieved or Not Improved.			Males.	Fe- males.	Total.	Males.	Fe- males.	Total.
	Males.	Fe- males.	Total.	Males.	Fe- males.	Total.	Males.	Fe- males.	Total.						
Under 1 month ..	7	6	13	..	..	..	5	3	8	1	3	4	1	2	3
1 month and under 3 months ..	7	12	19	..	..	..	2	8	10	1	1	2	4	7	11
3 months and under 6 months ..	5	7	12	..	2	2	..	3	3	1	1	2	3	7	10
6 months and under 9 months ..	1	4	5	..	..	..	2	4	6	1	1	2	5	8	13
9 months and under 12 months ..	..	1	1	..	..	..	1	..	1	..	..	..	3	3	6
1 year and under 2 years ..	..	3	3	..	1	1	2	2	4	2	2	4	16	22	38
2 years and under 3 years ..	..	1	1	..	..	..	2	1	3	2	..	2	16	14	30
3 years and under 5 years ..	..	2	2	1	..	1	..	1	1	3	1	4	44	29	73
5 years and under 7 years ..	..	..	..	..	..	..	..	..	..	..	..	..	25	20	45
7 years and under 10 years ..	..	..	..	1	..	1	..	..	..	10	2	12	49	45	94
10 years and under 12 years ..	..	..	..	..	..	..	..	..	..	2	3	5	43	22	65
12 years and under 15 years ..	..	..	..	..	..	..	..	..	..	1	3	4	48	53	101
15 years and under 20 years ..	..	..	..	..	..	..	..	..	..	2	3	5	72	97	169
20 years and over ..	..	..	..	..	..	..	..	..	..	20	14	34	251	286	537
	20	36	56	2	3	5	14	22	36	46	34	80	580	615	1,195

TABLE CV.

QUANTITIES OF FARM AND GARDEN PRODUCE.					
Ensilage	..	..	..	..	500 tons
Lucerne Hay	..	..	..	..	35 tons
Wheaten and Oaten Hay	..	..	..	..	100 tons
Vegetables	..	..	..	..	127 tons
Milk	..	..	..	..	42,472 gallons

TABLE CVI.

ARTICLES MADE IN THE WORKROOM DURING THE TWELVE MONTHS ENDING 30TH JUNE, 1949.

Aprons	..	..	..	..	..	289
Bags, mail	..	..	..	..	..	2
Bags, net and cord	..	..	..	..	..	22
Bags, stocking	..	..	..	..	..	140
Bandages	..	..	..	..	..	12
Belts	..	..	..	..	..	1
Bibs	..	..	..	..	..	74
Blazers	..	..	..	..	..	72
Blinds	..	..	..	..	..	6
Blouses	..	..	..	..	..	—
Boots, flannel	..	..	..	..	..	18
Brassieres	..	..	..	..	..	2
Coats	..	..	..	..	..	13
Combinations	..	..	..	..	..	1,217
Covers, table, toilet, &c.	..	..	..	..	..	50
Curtains	..	..	..	..	..	10
Drawers, men's	..	..	..	..	..	96
Drawers, women's	..	..	..	..	..	53
Dresses	..	..	..	..	..	1,579
Gowns, Dressing	..	..	..	..	..	3
Gowns, night	..	..	..	..	..	1,514
Gowns, theatre	..	..	..	..	..	5
Hats, women's	..	..	..	..	..	4
Jackets, duck	..	..	..	..	..	7
Jackets, straight	..	..	..	..	..	21
Jackets, women's	..	..	..	..	..	699
Mattress protectors	..	..	..	..	..	26
Mosquito nets	..	..	..	..	..	16
Muff suits	..	..	..	..	..	14
Napkins	..	..	..	..	..	26

Overalls	..	..	..	..	..	27
Petticoats	..	..	..	..	..	471
Pillows	..	..	..	..	..	2
Pillow cases	..	..	..	..	..	1,424
Pyjama coats	..	..	..	..	..	782
Pyjama trousers	..	..	..	..	..	495
Quilts	..	..	..	..	..	84
Rugs, canvas	..	..	..	..	..	43
Runners	..	..	..	..	..	51
Serviettes	..	..	..	..	..	34
Sheets	..	..	..	..	..	2,296
Sheets, canvas	..	..	..	..	..	7
Sheets, laundry	..	..	..	..	..	10
Sheets, waterproof	..	..	..	..	..	311
Shifts	..	..	..	..	..	72
Shirts	..	..	..	..	..	17
Shrouds	..	..	..	..	..	85
Tablecloths	..	..	..	..	..	366
Ticks, canvas	..	..	..	..	..	41
Ticks, linen	..	..	..	..	..	259
Towels, hand	..	..	..	..	..	960
Towels, Dressing	..	..	..	..	..	118
Towels, kitchen	..	..	..	..	..	434
Trousers	..	..	..	..	..	6
UNIFORMS:—						
Aprons	..	..	..	..	..	181
Collars	..	..	..	..	..	96
Belts	..	..	..	..	..	144
Veils	..	..	..	..	..	46
Caps	..	..	..	..	..	91
Dresses	..	..	..	..	..	192

TABLE CVII.

EXPENDITURE TABLE.

Average number of daily resident during the year		..	..	..	..	1,203
						£ s. d.
Total expenditure	..	..	..	..	164,203	0 7
Maintenance collected by Public Curator	..	..	..	..	13,926	14 9
Sales	..	..	..	..	1,182	19 0
Net expenditure	..	..	..	..	149,093	6 10
Gross cost per patient per annum	..	..	..	..	136	9 10
Net cost per patient per annum	..	..	..	..	123	18 8
Gross cost per patient per week	..	..	..	..	2	12 6
Net cost per patient per week	..	..	..	..	2	7 8

IPSWICH MENTAL HOSPITAL.

W. P. H. PARKER, L.R.C.P. & S. (Irel.), Medical Superintendent.

The general health of the patients has been satisfactory and there were no serious epidemics.

Patients have been entertained with dances, talking pictures, band, and concert parties.

The local sub-branch of the R.S.S.A.I.L.A. have continued their hospitality to the returned soldier patients.

The Red Cross Society continues to donate gifts to the ex-servicemen patients weekly.

The staff orchestra supplied the music for the patients' fortnightly dances.

The clergy of the various denominations visited our sick patients and religious services were held regularly.

The visiting dentist (Mr. McKenna) attends to the patients each fortnight.

During the year Mr. H. J. Appleby was appointed visiting chiropodist to this hospital.

The Official Visitors and the Director of Mental Hygiene have visited the hospital regularly.

No magisterial inquiries were held during the year.

Three male patients escaped during the year. All were recaptured within a few hours.

A shortage of female nurses still exists, but the employment of male assistants in the female wards is relieving the situation.

I regret to record the death of head male nurse T. J. Kelly on 7th November, 1948, and my sympathy is extended to his family.

The various statistical tables have been compiled and are enclosed herewith for your information.

TABLE CVIII.—MENTAL HOSPITAL, IPSWICH.
ADMISSIONS, READMISSIONS, DISCHARGES, AND DEATHS
DURING THE YEAR ENDING 30TH JUNE, 1949.

—	Males.	Fe- males.	Total.
On books of hospital on 30th June, 1948	371	167	538
Admitted for the first time ..	18	8	26
Readmitted .. .. .	..	..	..
Transferred from Toowoomba ..	..	..	..
Transferred from Brisbane ..	2	11	13
Transferred from Townsville ..	..	..	..
	20	19	39
Total under care	391	186	577
Discharged, died, transferred—			
Discharged, recovered	2	1	3
Discharged, relieved	2	2	4
Discharged, not improved ..	..	..	..
Discharged, section 49	1	..	1
Discharged, section 57	1	..	1
Transferred to Toowoomba ..	1	..	1
Transferred to Brisbane	3	1	4
Transferred to Townsville ..	..	..	..
Died	23	5	28
Total discharged, died, &c. ..	33	9	42
Remaining on the books on 30th June, 1949	358	177	535
Average number daily resident ..	359	169	528
Number on leave of absence on 30th June, 1949	3	..	3

TABLE CIX.—MENTAL HOSPITAL, IPSWICH.
FORMS OF MENTAL DISORDERS IN PATIENTS ADMITTED
DURING THE YEAR.

—	Males.	Fe- males.	Total.
Congenital Mental Deficiency ..	..	..	..
Congenital Mental Deficiency with Epilepsy	1	1	2
Congenital Mental Deficiency—Idiocy .. .. .	..	1	1
Congenital Mental Deficiency—Imbecility	17	6	23
	18	8	26

TABLE CX.—MENATL HOSPITAL, IPSWICH.
CAUSES OF DEATHS DURING THE YEAR ENDING 30TH
JUNE, 1949.

—	Males.	Fe- males.	Total.
Arteriosclerosis	1	..	1
Bronchopneumoni	3	..	3
Cerebral Hæmorrhage	2	1	3
Chronic Colitis	1	..	1
Cerebral Oedema	1	..	1
Coronary Thrombosis	2	1	3
Epilepsy	1	1	2
Malignant Disease of Stomach ..	1	1	2
Malignant Disease of Stomach and Liver	1	..	1
Myocarditis	6	..	6
Pulmonary Tuberculosis	1	..	1
Pyelitis	1	..	1
Status Epilepticus	1	1	2
Valvular Disease of Heart	1	..	1
	23	5	28

TABLE CXI.—MENTAL HOSPITAL, IPSWICH.
BODILY HEALTH AND CONDITION OF PATIENTS ADMITTED
DURING THE YEAR.

—	Males.	Fe- males.	Total.
In apparently good health and condition	17	5	22
In indifferent health and reduced condition .. .. .	..	3	3
In bad health and exhausted condition	1	..	1
	18	8	26

TABLE CXII.—MENTAL HOSPITAL, IPSWICH.
BIRTHPLACES OF PATIENTS ADMITTED DURING THE YEAR.

—	Males.	Fe- males.	Total.
Barcaldine	1	..	1
Brisbane	7	2	9
Chinchilla	1	..	1
Clermont	1	..	1
Goomeri .. .. .	..	1	1
Mundubbera .. .. .	..	1	1
Rockhampton	1	..	1
Queensland	4	1	5
Unknown	3	3	6
	18	8	26

TABLE CXIII.—MENTAL HOSPITAL, IPSWICH.

DISTRICTS WHENCE PATIENTS WERE RECEIVED DURING THE YEAR ENDING 30TH JUNE, 1949.

	Males.	Females.	Total.
Northern and North-western Districts .. .. .	..	..	..
Central Districts .. .. .	..	..	..
Southern and South-western Districts	18	8	26
	18	8	26

TABLE CXIV.—MENTAL HOSPITAL, IPSWICH.

AGES OF PATIENTS WHOSE ADMISSIONS, DISCHARGES OR DEATHS OCCURRED DURING THE YEAR, AND OF PATIENTS WHO REMAINED IN THE HOSPITAL ON 30TH JUNE, 1949.

	Admissions.			Discharges.						Deaths.			Remaining.		
				Recovered.			Relieved or not Improved.								
	M.	F.	T.	M.	F.	T.	M.	F.	T.	M.	F.	T.	M.	F.	T.
Under 5 years	6	5	11	1	..	1	..	..	..	2	1	3	13	6	19
5 years and under 10 years	11	3	14	..	..	..	2	..	2	1	..	1	33	13	46
10 years and under 15 years	1	..	1	..	..	..	..	1	1	1	..	1	12	14	26
15 years and under 20 years	..	..	..	..	..	..	..	..	..	..	..	..	8	11	19
20 years and under 30 years	..	..	..	..	1	1	..	..	..	1	..	1	12	12	24
30 years and under 40 years	..	..	..	..	..	..	1	1	2	3	1	4	29	22	51
40 years and under 50 years	..	..	..	..	..	..	..	..	..	1	..	1	58	26	84
50 years and under 60 years	..	..	..	..	..	..	..	..	..	3	..	3	88	28	116
60 years and under 70 years	..	..	..	1	..	1	..	..	..	4	2	6	54	29	83
70 years and under 80 years	..	..	..	..	..	..	..	..	..	5	1	6	36	11	47
80 years and under 90 years	..	..	..	..	..	..	..	..	..	2	..	2	13	4	17
90 years and over .. .. .	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Unknown .. .. .	..	..	..	..	..	..	..	..	..	..	..	..	2	1	3
	18	8	26	2	1	3	3	2	5	23	5	28	358	177	535

TABLE CXV.—MENTAL HOSPITAL, IPSWICH.

PREVIOUS OCCUPATIONS OF PATIENTS ADMITTED DURING THE YEAR.

	Males.	Fe-males.	Total.
Nil (Children)	18	8	26
	18	8	26

TABLE CXVI.—MENTAL HOSPITAL, IPSWICH.

MARITAL STATUS OF PATIENTS WHOSE ADMISSIONS, DISCHARGES AND DEATHS OCCURRED DURING THE YEAR AND OF PATIENTS WHO REMAINED IN THE HOSPITAL ON 30TH JUNE, 1949.

Marital Status.			Admissions.			Discharges.						Deaths.			Remaining.		
						Recovered.			Relieved or Not Improved.								
			Males.	Fe- males.	Total.	Males.	Fe- males.	Total.	Males.	Fe- males.	Total.	Males.	Fe- males.	Total.	Males.	Fe- males.	Total.
Single	18	8	26	1	1	2	3	1	4	18	3	21	289	109	398		
Married .. ..	..	..	..	1	..	1	..	..	..	4	2	6	52	54	106
Widowed .. ..	..	..	..	..	..	..	..	1	1	..	..	..	6	9	15
Divorced .. ..	..	..	..	..	..	..	..	..	..	..	..	..	..	2	2
Unknown .. ..	..	..	..	..	..	..	..	..	..	1	..	1	11	3	14
	18	8	26	2	1	3	3	2	5	23	5	28	358	177	535		

TABLE CXVII.—MENTAL HOSPITAL, IPSWICH.
QUANTITIES OF VEGETABLES AND FARM PRODUCE.

	T.	C.
Bush Hay	52	12
Chaff	6	15
Ensilage	64	5
Garden Vegetables	20	17
Green Feed	137	8
Potatoes	0	9
Pumpkins and Turnips	6	17

TABLE CXVIII.—MENTAL HOSPITAL, IPSWICH.

LENGTH OF RESIDENCE IN THE MENTAL HOSPITAL OF THE PATIENTS WHO WERE DISCHARGED OR WHO DIED DURING THE YEAR AND OF PATIENTS WHO REMAINED ON THE BOOKS OF THE HOSPITAL ON 30TH JUNE, 1949.

	Discharges.									Deaths.			Remaining.		
	Recovered.			Section 49.			Relieved or Not Improved.								
	Males.	Fe- males.	Total.	Males.	Fe- males.	Total.	Males.	Fe- males.	Total.	Males.	Fe- males.	Total.	Males.	Fe- males.	Total.
Under 1 month	1	1	2	1	1	2
1 month and under 3 months ..	1	..	1	..	..	..	..	..	..	1	..	1	3	6	9
3 months and under 6 months	1	..	1	..	..	..	10	3	13
6 months and under 9 months	1	..	1	..	1	1	..	..	..	1	4	5
9 months and under 12 months
1 year and under 2 years	1	1	3	..	3	19	10	29
2 years and under 3 years ..	1	1	2	..	..	..	1	..	1	1	1	2	22	7	29
3 years and under 5 years	2	..	2	47	16	63
5 years and under 7 years	3	1	4	43	42	85
7 years and under 10 years	1	..	1	37	8	45
10 years and under 12 years	1	..	1	29	16	45
12 years and under 15 years	1	..	1	19	8	27
15 years and under 20 years	40	16	56
20 years and over	9	2	11	87	40	127
Totals ..	2	1	3	1	..	1	2	2	4	23	5	28	358	177	535

TABLE CXIX.—MENTAL HOSPITAL, IPSWICH.
EXPENDITURE TABLE.

Average number daily resident during the year	..	..	..	..	..	..	..												528
Total expenditure	..	...	..	..	..	..	..	..	..	..	..	..	107,931	13	7				
Maintenance collected by Public Curator	..				..	..	..	..	..	..	..	..	4,833	13	6				
Sales	..	..	..	..	..	..	..	..	..	..	..	..	320	4	0				
Net expenditure	..	..	..	..	..	..	..	..	..	..	..	..	102,777	16	1				
Gross cost per patient per annum	..	..	..	..	..	..	..	..	..	..	..	..	204	8	4				
Net cost per patient per annum	..	..	..	..	..	..	..	..	..	..	..	..	194	13	1				
Gross cost per patient per week	..	..	..	..	..	..	..	..	..	..	..	..	3	18	7				
Net cost per patient per week	..	..	..	..	..	..	..	..	..	..	..	..	3	14	10				

EPILEPTIC HOME, WILLOWBURN.

PATIENTS AT 30TH JUNE, 1948 : MALES, 46 ; FEMALES, 58 ; TOTAL, 104.

TABLE CXX.
FOR THE YEAR ENDED 30TH JUNE, 1949.

Age Group.	Admitted.		Discharged.		To Mental Hospital.		Deaths.		Remaining 30th June, 1949.		
	Male.	Fe-male.	Male.	Fe-male.	Male.	Fe-male.	Male.	Fe-male.	Male.	Fe-male.	Total.
Under 5 years . . . . .	..	..	..	..	..	..	..	..	..	..	..
5 years and under 10 years	2	..	..	..	..	..	..	..	3	..	3
10 years and under 15 years	1	1	..	..	..	..	..	..	6	6	12
15 years and under 20 years .. ..	..	2	..	1	..	..	..	..	5	6	11
20 years and under 25 years .. ..	..	1	..	1	1	..	..	..	6	2	8
25 years and under 30 years	1	2	..	..	..	..	..	1	8	7	15
30 years and under 35 years	1	1	..	..	..	..	..	..	4	8	12
35 years and under 40 years	1	1	..	..	..	1	..	..	5	8	13
40 years and under 45 years .. ..	..	..	..	1	..	..	..	..	5	6	11
45 years and under 50 years .. ..	..	..	..	..	..	..	..	..	3	7	10
50 years and under 55 years .. ..	..	..	..	..	..	..	..	..	2	3	5
55 years and under 60 years .. ..	..	..	..	..	..	..	..	..	2	3	5
60 years and under 65 years .. ..	..	..	..	..	..	..	..	..	..	5	5
65 years and under 70 years .. ..	..	..	..	..	..	..	..	..	..	..	..
70 years and under 75 years .. ..	..	..	..	..	..	..	..	..	..	..	..
75 years and under 80 years .. ..	..	..	..	..	..	..	..	..	2	..	2
80 years and under 85 years .. ..	..	..	..	..	..	..	..	..	..	..	..
85 years and under 90 years .. ..	..	..	..	..	..	..	..	..	..	..	..
90 years and under 95 years .. ..	..	..	..	..	..	..	..	..	..	..	..
95 years and upwards .. .. .	..	..	..	..	..	..	..	..	..	..	..
Totals	6	8	..	3	1	1	..	1	51	61	112

PATIENTS RESIDENT—											
Under 5 years .. .. .	..	..	..	..	..	..	..	..	..	38	
5 years and under 10 years .. ..	..	..	..	..	..	..	..	..	..	27	
10 years and under 15 years .. ..	..	..	..	..	..	..	..	..	..	21	
15 years and under 20 years .. ..	..	..	..	..	..	..	..	..	..	12	
Over 20 years .. .. .	..	..	..	..	..	..	..	..	..	14	

CAUSES OF DEATH—
Female aged 30. Asphyxia, Epileptic Seizure, Chronic Epilepsy.

On the 21st May, 1949, the death occurred of the Superintendent, the late F. H. Julian. He was very well respected by staff and patients. He worked unceasingly for the betterment of the patients and the Epileptic Home. Many improvements were carried out since his appointment and he had great hopes of further improvements during the coming year.

School.—The present school is inadequate for the needs of the children, and the Kettle property is being converted into a temporary school. Considerable progress has been made in that direction.

Refrigeration.—The new refrigeration unit is installed. This will primarily be used as a store unit, but cannot be put into operation until that part of the kitchen veranda is enclosed.

Enclosure.—The work on the enclosure of the verandas and corridors of the wards and administration block has been commenced. This will be a great improvement in comfort for the patients. The laying of the fire mains are completed and the hydrants fixed, also the hot-water showers in both male and female wards are installed.

Laundry.—The laundry work is carried out under great difficulties. The existing small washing machine has been repaired on numerous occasions and is now unserviceable.

Heating System.—The wards are still without any heating system.

Grounds.—Good crops of vegetables have been maintained and we have been producing suffi-

cient eggs to meet our own requirements. The appearance of the grounds has been improved by additional lawns and asphaltting of paths.

Miss Dowrie.—Miss Dowrie has taken up duties as assistant psychologist and up to the present time has been engaged in assessing the capabilities of the patients.

Entertainments.—These are held regularly and frequently. They comprise a weekly picture programme, dances, card and game evenings. A special dance is held once a month when the patients may invite their friends. Since the arrival of a motor vehicle many patients have been taken for outings. This has given much pleasure to children, cripples, and older patients who otherwise could not enjoy such outings. Mr. Bloom and his concert party has visited the Home on several occasions. The Methodist Ladies' Guild and Church of England Ladies gave a Christmas party and gifts to the inmates. Mrs. Bourne's pupils in dancing also visited the Home. We hope to have a radio installed very soon and this will give added joy to the patients. The recreation ground has yet to be completed.

Clergy.—The religious interests of the patients are guarded and services of the various denominations are held regularly.

Occupational Therapy.—The C.W.A. Ladies visited the Home weekly for part of the year and the patients were interested in the various crafts taught.

Staff.—There is still a shortage of nursing staff.

SECTION OF SOCIAL SERVICES.

Welfare Officer: MRS. V. WILLS.

The problems confronting the Welfare Officer during the past year have been many and varied. Most time was spent visiting the homes of patients notified as suffering from tuberculosis. The patient, if not going to hospital, was instructed in personal hygiene in relation to the prevention of spread of the disease, while discussions took place with the contacts in regard to their protection. These included recommendations for Mantoux testing and B.C.G. vaccination, if indicated, and X-ray. Arrangements were made with the authorities for these tests to be carried out, conveyances often being provided by the Department. Inquiries were made in connection with the financial position of the patient so as to ascertain eligibility for the tuberculosis allowance, and where the patient was eligible the necessary forms were left for completion by the doctor. Unfortunately, time prevented the necessary follow-up and it is hoped another appointment will be made in the coming year.

Bad housing predisposes to tuberculosis and where unhygienic conditions exist every effort is made to find better accommodation for the patient and his family.

Although the gastro-enteritis epidemic has terminated, supervision of the temporary housing camps still continues and occupants are advised as to the necessity for adhering strictly to hygienic practices, especially in communal areas. It has been found that the standard of hygiene of most of the occupants is good, but like other sections of the community there is the odd family who do not realise that their standard

of hygiene is a danger to the rest of the community.

Periodical inspections of ladies' public conveniences both in the city and at the Exhibition have continued, although this is not really the responsibility of the Department.

Accommodation, both temporary and permanent, has been arranged through the State Housing Commission for numbers of people who have been either evicted or were living under unhygienic conditions. Accommodation has also been secured for patients discharged from the Brisbane Mental Hospital; these people have been seen daily and every assistance given them to rehabilitate themselves. Patients have also been taken to and from the psychiatric clinic for treatment.

As previously, the sick in hospitals and in their homes have been visited and arrangements made for them to receive medical, dental, and, where necessary, hospital treatment.

Many mothers feel that they cannot enter hospital because of a young family at home without anyone to look after them, and in these cases arrangements are made to have the children admitted to the Maternal and Child Welfare Home at Sandgate.

Complaints regarding neglected children have been investigated and reports furnished to the State Children's Department. Assistance has been given to wayward girls, who have been visited in His Majesty's Prison and for whom suitable employment and accommodation has been found on their discharge.

LEGISLATION.

"*The Health Acts, 1937 to 1946*," were amended by "*The Health Acts Amendment Act of 1948*," which was assented to on 17th December, 1948, and appeared in the *Government Gazette* of 22nd idem. It gave power to the Director-General to negotiate and enter into an agreement with any person as to the period during which, and as to the provisions, terms, and conditions upon and subject to which, that person shall be authorised to discharge waste process water from a factory or manufacturing process specified in such agreement into any water course named in the agreement.

"The Poisons Regulations of 1947" were amended on 27th January, 1949. Local Authorities were permitted to sell any poison specified in Schedule I. or Schedule II. for use as pest exterminators or for pastoral, agricultural, or horticultural purposes.

A new Regulation (44A) dealt with prescriptions containing any restricted drug or any dangerous drug or any poison specified in Schedule I. or Schedule II.—they shall be deemed to be cancelled after a period of six months from the date on which they were written.

The manufacture or sale of fireworks containing arsenic (calculated as arsenic trioxide) was forbidden, and the following substances were added to Schedules I., II., and IV. of the Poisons Regulations:—

To Schedule I. (Poisons)—

4, 4'-diamine diphenyl sulphone, derivatives of ;
Aerosporin ;
Aureomycin ;
Antibiotic substances (not specifically named in this Schedule) ;
Chloromycetin ;
Hydantoin, derivatives of ;
Insulin ;
Penicillin ;
Sex hormones ;
Streptomycin ;
Thyroid gland.

To Schedule IV. (Restricted Drugs)—

4, 4'-diamine diphenyl sulphone, derivatives of ;
Aerosporin ;
Aureomycin ;
Antibiotic substances (not specifically named in this Schedule) ;
Chloromycetin ;
Streptomycin.

To Schedule III. (Poisons)—

Alpha naphthyl thiourea.

"The Food and Drug Regulations, 1939," were amended on 21st March, 1949 (*Government Gazette*, 26th March, 1949). No licensed victualler or holder of a booth licensed under the Liquor Acts is permitted to allow waste

beer (ale or stout) to be in any container, receptacle, or appliance on his licensed premises unless such receptacle, &c., contains methyl violet in sufficient quantity to impart a distinct violet colour at all times to such waste beer, ale, or stout; no receptacle capable of holding beer shall be allowed in any drip tray in or on such licensed premises.

Diarrhoea of more than 48 hours' duration in children under two years of age was declared to be a notifiable disease under "*The Health Acts, 1937 to 1948*," by notifications which appeared in the *Government Gazette* on 26th March, 1949.

The *Government Gazette* of 2nd April, 1949, contained "The Poisons (Fumigation) Regulations, 1949" and in them fumigation is defined as "fumigation with carbon disulphide carried out in any building." Carbon disulphide was added to the substances specified as poisons in Schedule II. of "The Poisons Regulations of 1947." The Regulations are in force throughout the State of Queensland and are administered by the Local Authorities.

Section 115 of "*The Health Acts, 1937 to 1948*," was extended to the areas of the Town of Bowen and the Shire of Johnstone, by notification in the *Government Gazette* of 4th June, 1949. The effect of this action is that no person shall sell milk (by retail) in these areas unless he is licensed and his premises are registered under such Acts.

The work done during the year has been up to the high standard of previous years and I desire to express my gratitude to all members of the staff for their unfailing and conscientious attention to duty. Thanks are also given to Government Departments, particularly the Department of Public Works, to Local Authorities, to the Press for the publicity they have given to the work of the various sections of the Department, to the Council of the Queensland Branch of the British Medical Association for the ready assistance given in bringing under the notice of their members requests from the Department and their advice on technical matters referred to them, and to the members of the medical profession for their co-operation with the several officers of the Department in the course of their duties.

ABRAHAM FRYBERG,
M.B., B.S. (Melb.), D.P.H., D.T.M.
(Syd.), Director-General of Health
and Medical Services.

APPENDIX.

FOUNDRY SURVEY.

By DOUGLAS GORDON, M.B., B.S., Medical Officer in Industrial Hygiene.

In late 1944 and early 1945 Dr. E. J. Reye, of this Department, at the instance of various employee organisations had 100 foundry employees, mainly from the larger metropolitan shops, X-rayed. As a result of this pilot survey 5 men were considered to be suffering from silicosis. The Hon. T. A. Foley, M.L.A., called a conference on 23rd March, 1945, of all interested parties and Departments, and it was decided to do a medical and radiological survey of the whole foundry industry in Queensland. Owing to shortage of suitable films this was not undertaken until December, 1946, and from then on until the end of 1948 the survey was carried on as time permitted by the section of industrial hygiene.

The results of the investigations are as follows:—

THE SIZE OF THE QUEENSLAND FOUNDRY INDUSTRY.

TABLE 1.

Type of Foundry.	Total.	Percentage of Total.
Iron	22	29.0
Non-ferrous	19	25.0
Steel	1	1.3
Combined	34	44.7
	76	100.0

TABLE 2.

Size of Foundry.	No. of Foundries.	Percentage of Total No. of Foundries.
1-4 men	24	31.5
5-9 men	18	23.7
10-14 men	14	18.4
15-19 men	5	6.6
20-29 men	7	9.2
30-49 men	3	4.0
50 and over	5	6.6
	76	100.0

TABLE 3.

Size of Foundry.	Total Number Employed in Foundries of these Sizes.	Percentage of Total Labour Force (Approx.).
1-4 men	69	6
5-9 men	121	10
10-14 men	151	13
15-19 men	79	7
20-29 men	189	19
30-49 men	96	8
50 and over	413	37
	1,118	100.0

TABLE 4.

Place.	No. of Foundries.	No. of Employees.
Brisbane	46	589
Ipswich	4	143
Toowoomba	3	122
Maryborough	5	104
Bundaberg	1	31
Mackay	4	29
Ayr	1	7
Dalby	1	12
Townsville	1	9
Innisfail	2	9
Cairns	1	5
Rockhampton	3	28
Babinda	1	3
South Johnstone	1	3
Mossman	1	1
Mount Morgan	1	23
	76	1,118

One interesting fact was discovered in reading literature in relation to the foundry industry. In spite of our concept of the hugeness of American industry it was noted that New York, for instance, has its share of the “small” foundry just as we have. Foundries, for instance, employing 1 to 4 men in New York State constitute 25.4 per cent. of the total number of foundries and in Queensland 31.5 per cent. Only four foundries in this State, however, make steel castings regularly and one of these engages in this work in a very small way. This smallness of the steel moulding industry greatly reduces our potential dust hazard.

PERSONNEL IN THE INDUSTRY.

(i.) In the post-war years there has been a large labour turnover in the industry—particularly in the unskilled callings, though skilled tradesmen have also had their share of this restlessness;

(ii.) The unskilled men, particularly dressers and furnacemen, are most likely to develop silicosis—a disease which takes many years of exposure to contract. Many such men even if exposed to a dust hazard do not stay long enough in the trade to become dusted.

(iii.) Of the hundred men X-rayed by Dr. Reye forty could not now be found in the industry. Twenty-three of these were moulders.

GENERAL CONDITIONS FOUND IN THE INDUSTRY.

A reasonable common-sense individual would have to record the following impression of average conditions in the industry:—

General housekeeping ..	Moulding floors—fairly good
	Dressing shops—bad.
General ventilation ..	Good.
Lighting	Poor.
Amenities	Poor.
Dust control	Moulding floors—fair.
	Dressing shops—bad.

As against this there are odd foundries—large and small—that are models of cleanliness and efficient housekeeping in almost all departments

DANGEROUS FOUNDRY PROCESSES.

Moulding—

The more hazardous processes in a foundry are as follows:—

Dressing Castings—

- (i.) Sand blasting without adequate precautions;
- (ii.) Pneumatic chippers;
- (iii.) Grinding;
- (iv.) Rumbling;
- (v.) Hand Dressing.

(vi.) Machine moulding where parting powders containing large amounts of free silica are used;

(vii.) Foundry shake-outs;

(viii.) Jobbing moulding in steel shops.

Steel shops are particularly dangerous and the larger the foundry—other conditions being equal—the more likely there is to be dust in dangerous concentrations.

RESULTS OF SURVEY.

TABLE 5.—CASES DIAGNOSED AS SILICOSIS.

No.	Age.	Occupational History.	Degree of Disability.	Present Activities.	Classification According to X-ray.	Outlook.
1	58	Twenty years <i>steel and iron dresser</i> . At least 4 hours per day for 16 years of this on the pneumatic chisel in open air	Slight shortness of breath	Still dressing ..	Early silicosis Stage I (First diagnosed in the 1944 survey, since which time there has been some progression)	Reasonably good. Is capable of good work for quite a few years yet
2	58	<i>Iron furnaceman</i> 15 years, daily slag chipping. Last 4 years iron moulder's assistant	Fit for light work only. Increasing cough and asthma	Has gone on to compensation after working for a number of years since first diagnosed	Moderately early silicosis Stage I. (In previous survey, classed as doubtful)	Hardly fit for any more work. Will probably live for a few years yet
3	61	Iron plate and jobbing moulder for over 40 years in the one moderate sized stove foundry, but during this time has always done the furnace work, and from a health hazard should be classed as a <i>furnaceman</i>	Very little. Losing a little weight	Moulding. Recommended to leave furnace work, but it is doubtful if he has done this	Early silicosis Stage I	Good. Will not greatly affect his expectation of life
4	57	<i>Iron dressing</i> , grinding, &c., 9½ years. Coal miner as a lad for one year only. His trouble could perhaps be a legacy of his coal mining, but is probably not	Nil. . . .	Blacksmith's assistant	Moderate early silicosis Stage I	Good
5	34	<i>Iron dresser in Victoria</i> for 7 years in a very large and dusty stove shop. One year as plate moulder in Q'ld. Disease obviously due to his Victorian experience	Nil. . . .	Moulding—to keep away from dusty shops	Early silicosis Stage I	Difficult to say. Will probably reduce his expectation of life
6	46	<i>Steel dresser</i> 28 years. Twenty years on pneumatic chisel	Fit for light work only. Cough	"Runner" in machine shop	Silicosis late Stage II? Superadded tuberculosis infection	Poor. Will greatly reduce earning power and expectation of life
7	51	<i>Furnaceman and converter hand</i> . At least 15 years on steel furnaces and converter. A previous worker at this job, since dead, also was diagnosed as having silicosis	Fit for light work. Suffers also from a bad heart	Light odd jobs around foundry	Silicosis Stage II? Tuberculosis infection super-added	Poor. His heart trouble, however, is the most acute lesion
8	46	<i>Machine moulder</i> in large stove shop, 32 years. The first decade of this was in a shop—since closed—which has produced at least one other case of silicosis	Nil. . . .	Moulding in good conditions	Very early silicosis Stage I	Good
9	67	<i>Jobbing iron moulder</i> 50 years. Last 40 in the one shop—one of the largest jobbing shops in the State. This case was not altogether to be expected	Practically nil. Disability, if any, more likely due to age	Retired the day his X-ray was taken	Silicosis Stage I. Has not progressed in 2 years	Normal expectation of life for his age

TABLE 5.—CASES DIAGNOSED AS SILICOSIS—continued.

No.	Age.	Occupational History.	Degree of Disability.	Present Activities.	Classification According to X-ray.	Outlook.
10	65	25 years at least— <i>iron dressing</i> . 18 on portable grinder, 7 on pneumatic chisel	Unfit for work ..	Has gone on compensation	Silicosis early Stage II	Will make the last years of his life a burden
11	58	27 years in foundry—the last 19 in a large jobbing and machine moulding shop. 12 years machine moulding. 10 years mixing facing sand. 5 years on pug mill. Hazard probably in machine moulding. Came from same shop as case 9	Nil.. ..	Pug mill hand under reasonable conditions	Silicosis Stage I ..	Good
12	62	<i>Iron dresser</i> in stove shop on and off for 30 years. Originally in same shop as case 8	Fit for light work	Iron dresser. Conditions not good, but patient refuses to change	Silicosis Stage I ..	Moderate. Is experiencing pain in the chest
13	47	<i>Steel furnaceman</i> 14 years	Fit for moderate heavy work	Odd jobs in foundry	Silicosis Stage I ..	Reasonably good

TABLE 6.

LENGTH OF TRADE EXPOSURES BY OCCUPATION OF THOSE X-RAYED.

Period of Work in Foundries.		No. X-rayed.	Percentage of Total.
<i>Moulders.</i>			
14–19 years		66	32·6
20–29 years		63	31·2
30–39 years		41	19·8
Over 40 years		33	16·4
		203	100·0
<i>Dressers.</i>			
4– 9 years		31	46·3
10–19 years		15	22·4
20–29 years		10	14·9
30–39 years		8	11·9
Over 40 years		3	4·5
		67	100·0
<i>Moulder's Assistants.</i>			
4– 9 years		24	57·1
10–19 years		11	26·2
20–29 years		5	11·9
30–39 years		2	4·8
Over 40 years .. ..		..	..
		42	100·0
<i>Other Iron Workers employed in Foundries.</i>			
4– 9 years		14	29·8
10–19 years		13	27·6
20–29 years		7	14·9
30–39 years		11	23·4
Over 40 years		2	4·3
		47	100·0

TABLE 7.

AGE GROUPS OF THE MEN EXAMINED AND X-RAYED.

Age.	Total.	Percentage of Total.
Up to 20 years	1	·3
21–30 years	44	12·3
31–40 years	113	31·3
41–50 years	88	24·6
51–60 years	86	24·0
Over 60 years	27	7·5
	359	100·0

TABLE 8.

PERCENTAGE OF ELIGIBILITY.

Occupational Group.	Total Foundry Workmen.	No. Eligible.	Percentage of Total.
Moulders	592	216	36·5
All foundry iron-workers	526	172	32·6
Total	1,118	388	34·7

TABLE 9.

PERCENTAGE OF THOSE ELIGIBLE WHO DECLINED X-RAY.

Occupational Group.	Total Eligible.	No. Declined.	Percentage of Total.
Moulders	216	13	6
All foundry iron-workers	172	16	9·3
Total	388	29	7·4

TABLE 10.

CASES CONSIDERED OF DOUBTFUL DIAGNOSIS.

No.	Age.	Occupational History.	Degree of Disability.	Present Activities.	Classification According to X-ray.	Outlook.
14	52	Jobbing iron moulder. Thirty odd years in large stove foundries	Nil	Moulding ..	Indefinite, but progression shown in rays	Good
15	45	Brass moulder—jobbing in the one shop (moderate size) for 30 years. Was classed as a positive in 1944 survey, but X-ray now is certainly not positive	Nil	Moulding ..	Indefinite ..	Probably good
16	61	Iron dresser. Sixteen years in a large shop. No pneumatic tools	Nil	Brass dressing ..	Indefinite. No response to request for further ray	Good
17	60	Brass moulder for 46 years—9 of these in Scotland, 37 in Australian brass shops of average size	Nil	Brass moulding ..	Doubtful silicosis	Doubtful
18	59	Iron moulder—jobbing and plate. Forty-seven years mainly in stove foundries of moderate and large size. Ten of these in Scotland	Nil	Iron moulding ..	Indefinite ..	Probably good
19	44	Steel moulder—jobbing—in moderate sized steel shop for 25 years	Nil	Steel moulding on probation	Doubtful ..	Probably good
20	40	Brass moulder, 24 years in small brass shop	Nil	Brass moulder ..	Probably clear. Did not respond to request for further rays	Good
21	58	Iron moulder—jobbing for about 40 years in large and moderate-sized shops. Fourteen years in United Kingdom	Slight shortness of breath	Moulding ..	Indefinite ..	Probably good
22	60	Jobbing iron and brass at least 35 years, including 5 years in Scotland. Rest in N. Queensland shops of moderate size	Nil	Jobbing moulding in a shop where there is no marked hazard	Probably clear ..	Good

CONSIDERATION OF DOUBTFUL CASES.

In Table 10 details in connection with nine doubtful cases are given. Originally there were quite a number more in this group, but with the passage of time and helped by the observation of further X-rays some final decision was made in many cases originally causing some doubt. Of these nine cases it would be surprising if more than one or two ever developed any serious chest disease. It will be appreciated, however, that in medical work the principle is to "play safe." At the moment nearly all are working in conditions where there was deemed to be little or no hazard. It will be noticed that in this group the ages on the whole tend to be a little lower, the sizes of shops in which they have worked are more varied, and a greater proportion of moulders are found. In other words, compared with those of the positive group, their occupational and clinical histories do not seem nearly so suggestive. In all cases where the men are agreeable arrangements are made for further rays periodically.

FOLLOW UP OF CASES DISCOVERED IN "PILOT" SURVEY.

Five Positives—

One died from an acute abdominal catastrophe—post-mortem showed definite silicosis;

Two are considered to be early silicotics but are still working in foundries;

The two others are still working and in this survey were not considered cases of silicosis;

Of Dr. Reye's ten doubtful cases one is now considered a silicotic while the rest are still negative—the others are alive and most of them are working.

SUGGESTED REMEDIES.

New Buildings for Foundries—

- (a) As open as possible consistent with warmth—not more than 100 feet wide and with the long sides facing into the prevailing summer breezes;
- (b) Openings in the roof should constitute at least $7\frac{1}{2}$ per cent. of the total floor space;
- (c) Floors should be of impervious material—except where pit moulding is practised—well drained, and with adequate clearly defined gangways and walking ways;
- (d) There should be racks for all tools and they should be used.

Lighting—

- (a) Improvement of general lighting by adequate roof lighting and by keeping all window panes clean;
- (b) Supply in certain situations of portable lights.

General Housekeeping—

A few minutes each day should be devoted to a general tidy-up of all parts of the foundry. Use of vacuum or damp methods for removing dust and application generally of a little ordinary cleanliness.

Moulding—

Use of parting powders which do not contain appreciable amounts of free silica.

Knocking Out—

In large foundries all boxes should be knocked out at a central knockout point subject to local exhaust ventilation. (In the small foundries knockingout processes were not particularly dusty.)

Dressing Shops—

In all foundries large and small dressing shops should have a well-drained impervious floor. All fettling processes should be subjected to local mechanical exhaust ventilation and where possible (such as when rumbling) should be enclosed.

Blasting—

Sand blasting should be abolished and shot blasting should be used only under very rigid conditions.

Chipping Slag—

When chipping slag in a furnace alternative precautionary measures could be used. None would be very popular until the men became used to them.

- (a) Light perspex pressure helmet with air supplied by a compressor; or
- (b) Portable exhaust; or
- (c) Continual wetting of the surface being chipped.

Medical Examination—

Radiological survey of all men at risk every three years, at least.